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THE JOSEPH H. PRATT DIAGNOSTIC HOSPITAL

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BOSTON

IF THE Joseph H. Pratt Diagnostic Hospital in Boston simply added a few beds to those already available in New England for medical care, it would hardly justify itself. It has been constructed with the idea that as the focal point in a broad program for the better distribution of medical care it can serve a unique and useful purpose in New England medicine. A description of the planned functions of the hospital then resolves itself into a description of this broad program for the advancement of medicine, particularly in non-metropolitan areas, to which end the Bingham Associates Fund has devoted itself for some seven years.

The Joseph H. Pratt Diagnostic Hospital, like the program to which it is dedicated, represents the humanitarianism of William Bingham, 2nd, a real philanthropist. The Bingham Associates Fund, through which the hospital and program have been made possible, was under the supervision of Dr. John G. Gehring, its first president, from 1931 to 1933. During the last six years (since Dr. Gehring's death) the Fund has been under the active, far-sighted direction of Dr. George B. Farnsworth, its second president.

The general aim is essentially that described by Dr. Joseph H. Pratt[1] in 1932, to which reference is made in *The Final Report of the Committee on the Costs of Medical Care*,[2] as follows: "An arrangement embodying some of the relations between branches and medical centers here proposed has been effected between the New England Medical Center in Boston and the Rumford (Maine) Community Hospital. It is described by Dr. Joseph H. Pratt." It is largely in recognition of this pioneer work that the hospital bears its name.

PLANNED PROGRAM AND GENERAL PROBLEM

The plan of the Bingham Associates Fund is designed to extend into small communities the medical advantages of a metropolitan center by direct and indirect contacts between these elements, arranged on a permanent working basis. It is intended that small communities shall maintain their opportunities for independent work, but that it shall be integrated with that of larger centers.

Unquestionably many of the benefits of medical advances ultimately reach small communities under almost any circumstances. At present, however, this dissemination is haphazard, irregular and slow. It is our hope to establish regular and directed channels for the transmission of medical developments. Accordingly, through hospital centers of various gradations, a model has been set up which involves the Tufts College Medical School and New England Medical Center in Boston as its central medical-school–hospital base, the Central Maine General Hospital in Lewiston, Maine, as its regional center, and community hospitals in Bath, Brunswick, Rockland, Augusta, Rumford and Skowhegan as its smaller affiliated units. The latter hospitals are within eighty miles of Lewiston and are easily accessible by train or automobile.

A regional center similar to the one in Lewiston is being established in Bangor at the Eastern Maine General Hospital for the purpose of offering direct aid to a group of small hospitals in the northeastern part of Maine. This, like the already established group, is intended as a model to serve as a basis for further development.

The plan of establishing graded centers (university-hospital medical center, regional centers and community hospitals) has proved effective. Such an arrangement tends to enable the units, which are graduated according to size and location, to be mutually stimulating. When, on the other hand, a direct association is attempted between hospitals too distant from one another and varying too greatly in size, equipment and facilities, the relation becomes one of dependence on the part of the smaller unit, and impersonal and disinterested help on the part of the larger one.

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The great advances in medicine, except for those in the field of public health, have given advantages chiefly to those practicing in metropolitan centers, where improvements have been more and more concentrated, so that finally there have developed such magnificent centers of advanced thought and practice in medicine as the Medical Center in New York City, the New York Hospital, the Lakeside Hospital and the Johns Hopkins Hospital. The influence of these institutions has gradually become greater, but relatively more concentrated, as rapid growth has occurred. The diffusion of this influence into small communities has been perhaps slower than necessary, largely because there has been no directed plan. Figuratively, as well as literally, such institutions have tended to grow into the skies. It is our purpose to direct development outward instead of upward, horizontally instead of vertically. A more or less direct means for the spread of the new developments of the metropolitan medical centers to rural communities would admittedly be desirable, and a planned program for this purpose is the essential aim of the Bingham Associates Fund.

Most plans for the improvement of rural medicine entail: postgraduate instruction; subsidies to physicians in small communities; and the establishment of community hospitals or other facilities for group practice. Such plans are obviously directed toward overcoming the two major defects of rural medicine, namely inadequate local facilities and advantages, and insufficient numbers of physicians. Unfortunately, it is the general opinion that they have not been entirely successful. The principal reasons are self-evident.

Some of the problems involved in postgraduate instruction are described below. As for subsidies, it would appear that where financial backing is certain and regular, the initial problem of securing well-trained men for small communities can be thus attacked. However, if, as is apparently the case, the conditions under which practice must be carried on in small communities are so unattractive as to fail to interest young graduates, a more logical approach to the problem would seem to lie in the direction of efforts toward making such practice more attractive. Automobiles, good roads, radios and other material advantages have overcome many of the social and broader cultural handicaps once associated with life in small communities. It remains to carry corresponding medical advances into these areas, and when this has been accomplished, young physicians may be expected to settle gladly in them. It will no longer be necessary to lure them by the offer of subsidies; they will instead be attracted by the opportunity to practice medicine under conditions comparing favorably with those in the medical centers in which they were trained.

The establishment of hospitals in rural communities is of unquestionable value; for among other things such units may offer the physical requirements for the utilization of the more modern methods of medicine. However, an expensive surgical unit does not ensure good surgery; a complete x-ray apparatus does not predicate accurate x-ray diagnosis; and a well-equipped laboratory does not guarantee scientific aid in medical management. In fact, such facilities may do more harm than good if not intelligently employed. It is only human to be lulled into false security by trusting blindly to the wisdom represented by awesome and expensive apparatus. It is natural to want to shift responsibility, and what better object can be found to which to shift it than some inanimate, unresponsive, shiny machine which is reputed to give us such and such reliable information? It is also human to have great confidence in impressive things about which we know little or nothing. A surgeon may actually be misled into a false belief in his sufficiency by the impressive display of all the modern equipment which he employs. A physician may wrongly give assurance concerning a patient's heart because "the electrocardiogram was normal," and a patient may be permitted to suffer untold mental anguish because x-rays were inaccurately interpreted as showing cancer. No medical weapons are deadlier than those of the pseudoscientist.

It is plain, then, that upon those who make modern facilities available to rural communities a great responsibility exists in assuring the proper, continued use of these facilities. It is in this latter respect that present programs for the advancement of rural medicine have not been entirely successful. If properly utilized, a community hospital can be the most effective unit in a program for the advancement of rural medicine, for it is ultimately the community hospital which will determine whether good or poor medicine is to be practiced in the community. It is therefore toward the improvement of small community hospitals that one of the principal features of our program is directed, namely the extension of services between such hospitals, larger intermediary units and a metropolitan center.

The program has three branches, each representing an approach to the general problem from another angle, the whole program being a coordinated effort toward making better medical care available to more people of New England, particularly in non-metropolitan areas. The three are as follows: diagnostic aid, hospital extension services and postgraduate education, as described below.

DIAGNOSTIC AID

In order to carry on our program, we require a teaching and a clinical base. The Tufts College Medical School is the teaching base; the New England Medical Center and, primarily, the Joseph H. Pratt Diagnostic Hospital form the clinical base. The clinical base should be not a hospital which will take over the hospital work of the affiliated communities, — this would be difficult and psychologically undesirable, — but a clearing-house for such problems as the latter, because of their limited facilities are unable to handle to the best advantage of the patients. The base hospital, then, serves as a complement to and not a substitute for the affiliated hospitals.

Unquestionably, one of the most important aids is a well-trained diagnostician. This, an institution especially devoted to diagnostic work is best able to supply. The Joseph H. Pratt Diagnostic Hospital, with a large and especially trained personnel, is prepared to offer diagnostic help in the more obscure problems. Such help is available directly to the physician in the small community or through his local hospital. Patients are accepted directly from a physician in rural communities only when he believes that the local or nearby hospital facilities for study are inadequate. This decision must rest with the referring physician.

Through our schedule of undergraduate and postgraduate instruction, it is hoped that ultimately most if not all the physicians who make use of the Diagnostic Hospital will become thoroughly familiar with its work. The utilization of the hospital can serve as an effective means of continued contact with and instruction from the central institution through study of the physician's own cases. Such instruction is personal and very real, and can aid in maintaining contacts from undergraduate days through repeated postgraduate courses. In addition, the diagnostic work can serve as the dynamic force which will weld and vitalize the administrative, clinical and pedagogic aspects of the entire program. Through actual work with patients these aspects assume a more direct and tangible meaning.

It is our aim to stimulate a desire for better diagnostic work; more intelligent and efficient treatment will naturally follow. There are probably two factors which more than any others dampen the desire for professional diagnostic help: fear of the referring physician that he may be found wrong, and hence fall in the estimation of his patient, and the idea that he will lose the patient by referring him to another physician or to an institution. That such considerations should not exist is beside the point; the fact is, they do exist, and they should be recognized and arrangements made accordingly.

The policies of the hospital are designed to overcome these difficulties. For this reason, no patient is admitted unless sent by a referring physician, to whose care the patient is finally discharged. The referring physician at all times maintains complete control over the disposal of the patient. Correspondence is confined to him, and subsequent admissions can be arranged only through him. A complete report of findings, with diagnosis and recommendations, is sent to him, and as little information as possible is divulged to the patient. If the latter raises questions, as frequently happens, he is informed that his own physician will receive all the information and recommendations which we have to offer, and is told that all questions must be referred to this physician. If the hospital diagnosis and recommendations differ from those already given the patient by the referring physician, the latter is free to explain this difference as he sees fit. Essentially, the desire is to eliminate any possible factor which may influence a physician to wait until it is too late for a consultation, where he might otherwise have sought aid earlier.

Of course, no policy is justifiable which protects the physician to the detriment of the patient, and this may appear to be the case here. However, there can be no gainsaying that the relation between the doctor and the patient is a much more important one than that between an institution and the patient. On the physician falls the responsibility for putting to good use the information which the hospital can supply. The application of such information, which may involve close supervision and prolonged care, must be made as free from difficulties as possible if the patient is to receive the maximum benefit. It is the purpose of the hospital to help the patient through his physician, and to improve the practice of medicine in small communities by offering help to its physicians.

It must be emphasized that no indictment is intended of the capabilities of general practitioners. The implication is only that no physician today can be wholly self-sufficient, for the simple reason that it is humanly impossible for one person to encompass all medical knowledge.

Another factor which tends to decrease the demand for diagnostic aid is the development of a smugness and a complacency that often go with isolation and the lack of information. Our efforts at postgraduate education are designed to overcome this situation, and in a small way are successful, as is attested by the increasing number of patients referred for special studies. Education

is, among other things, a process of making clear the ever-increasing extent of our ignorance.

It is said that the general practitioner can satisfactorily care for 80 or 90 per cent of his patients without the aid of a specialist. On the other hand, from 80 to 90 per cent of all illness, exclusive of the more severe neuroses, is either self-limited, relatively easily managed or unresponsive to treatment. If the practitioner can care satisfactorily for this percentage of his patients, does he? Or does any physician, for that matter? There must be a clear distinction between what *can* be done and what *is* done. A youngster with a simple sinus arrhythmia or perhaps a soft pulmonic systolic murmur does not require a specialist; in fact, he requires no physician at all. But he may be subjected to the shock of being told he has heart disease, or even of being put to bed for several months because of lack of knowledge of what he does not have, namely heart disease. There are many similar examples. We all encounter such cases frequently, and at times we are guilty of such errors. These cases are included among the patients who can be cared for by the practitioner, but they are evidently cases in which such special aid as may be given by a diagnostic hospital can be of real help. Instruction in what not to do is one of the important functions of this hospital.

Hospitals, especially in large cities, are frequently subjected to the criticism that their staffs are too restricted, or the reverse. If the restrictions are made too rigid in an attempt to maintain the highest standards of work, many physicians complain that they receive little or no help from the hospital, since they are permitted no satisfactory approach to the advantages which the institution has to offer. If, however, physicians are indiscriminately permitted on the staff, the quality of the hospital work must suffer.

We have attempted to meet this problem by permitting all licensed physicians free access to our facilities, but in the hospital the responsibility for diagnosis rests with a relatively small, full-time and specially trained staff. In this manner, a uniform and high standard of work can be maintained, which is directly available to all physicians and through them to all patients, whether they can pay at full rates, at reduced rates, or nothing, and whether they come from Massachusetts, Maine or some other part of New England.

HOSPITAL EXTENSION SERVICES

Experience has shown that in order to reach effectively the hospitals of small communities, an intermediary, large, central hospital within a given wide area is of great benefit. Working directly from an area like Boston to a small community in Maine involves going over the heads of large hospitals such as the Maine General Hospital in Portland, the Central Maine General Hospital in Lewiston and the Eastern Maine General Hospital in Bangor. A system of direct co-operation between a large center, such as Boston, and a small community in another state also has the disadvantage of a certain amount of awkwardness inherent in the problem of widely separated localities. Quick and ready co-operation between such widely separated points becomes difficult. On the other hand, with the establishment of intermediary centers within the state in question, this difficulty is overcome. We have, therefore, as already indicated, set up a direct line of activity from Boston through regional centers to the small community hospitals within easy reach of them. Such a plan, since it tends to bring into a single working scheme the centers of varying sizes within the state, also avoids the fault of setting up justifiable antagonism by those connected with the larger centers — antagonisms that might develop should direct approach be made from an outside metropolitan center to the small communities. In general, where there has been an active desire to aid small communities, the assistance of larger but more or less local centers has not been sufficiently utilized.

The manner in which these hospitals of various sizes become effective co-operating units can best be described by a brief résumé of our present program of extension services in the fields of laboratory work, radiology, pathology, electrocardiography, dietetics and library assistance.

Technicians in small community hospitals generally work without supervision and have no stimulating contacts in their own field of work. Under these circumstances, and after long-continued isolation, it is only natural that the quality of their work should suffer, and obviously they are not likely to be well informed concerning constantly developing new tests and methods. Designed to meet this need, our laboratory program operates as follows. The technician in each community hospital spends one month of each year in the Central Maine General Hospital in Lewiston, performing routine laboratory duties under the active supervision of a full-time pathologist. Another month each year is spent in the laboratories of the Tufts College Medical School and New England Medical Center, where instruction is given in new methods and procedures, and where technic is further improved. It thus becomes possible for the community hospitals affiliated in our program to employ the newest laboratory tests and technic

at least within a year after they have been instituted at the medical-school–hospital center. To the degree that supervision and instruction are essential for best results, our program for laboratory aid to small community hospitals appears to be adequate. It is significant that the supervision and instruction are given in Lewiston and Boston, and not in the community hospital. If the latter were the case, there would be a justifiable tendency to resent intrusion. During the two months when the technician is away from the community hospital, a well-trained itinerant technician serves as substitute.

The pathological service is organized in the following way. Each community hospital is expected to send all its specimens routinely to the pathologist at the Central Maine General Hospital, who sends back a report to the hospital. He also has the opportunity, in all questionable cases, of consulting with Dr. H. E. MacMahon, professor of pathology at Tufts College Medical School. In this way the latter is available to all the small hospitals on those cases in which his special knowledge is needed, whereas the routine work is adequately handled through Lewiston. The pathologist at Lewiston is also available for postmortem examinations and clinicopathological conferences at the small hospitals.

Under the arrangement for x-ray service, the radiologist at the Central Maine General Hospital visits the community hospitals one morning or afternoon each week, at which time he reviews with the local radiologist all the films of the preceding week and performs what fluoroscopies have been held over for him. He is also available at all times in Lewiston for interpretation of emergency films. We have arranged, through a fellowship, for the Lewiston radiologist to attend the weekly diagnostic x-ray conferences each Wednesday afternoon at the Massachusetts General Hospital, where he has an opportunity to present a limited number of films for group consultation. Ultimately, therefore, the community hospitals, through the Lewiston radiologist, have this Massachusetts General Hospital consultation service at their disposal. Thus, as in the pathological program, the Boston unit is utilized only where it can be most helpful, namely in unusual cases.

As to the electrocardiographic program, a course of one week's duration in the interpretation of electrocardiograms was given at the New England Medical Center to representatives of the community hospitals selected by their own groups. The course was furnished without charge on the condition that the hospital purchase an electrocardiograph. From the community hospitals the local electrocardiographer sends a copy of every tracing to the Lewiston electrocardiographer, whose reports then become available for check by the physician in the community hospital. The tracings that are difficult to interpret are then sent from Lewiston to Boston, where several cardiologists are available for consultation when necessary. In this manner, again, the small hospitals have available the best authorities on interpretation of electrocardiograms, when and as they are needed. At the same time, the electrocardiographer of the local hospital is given constant opportunity for supervised training and improvement. It has been our impression that small community hospitals should not have an electrocardiograph unless some satisfactory arrangement is made for the intelligent interpretation of the tracings.

The method for offering aid in dietetics is similar to that described for laboratory work. Arrangements are made for the dietitian from each community hospital to spend one month each year in Boston, where she is given instruction, so that she may be kept informed of the rapid developments in this important field.

The library service is now getting under way. Every four days, each community hospital receives from the library of the regional center in Lewiston five medical journals, which are prominently displayed and remain in each hospital for four days, after which they are sent on to a neighboring hospital. During twenty-eight days of each month, each community hospital receives thirty-five medical journals. Reprints of almost all the articles can be obtained through the library at the Central Maine General Hospital, which is also equipped to supply the bibliographical material to any of the staff members of the affiliated hospitals who may wish to make a more complete review of the literature in regard to a special case or for aid in preparing a paper. The library in Lewiston, in turn, is affiliated with the Boston Medical Library, and can obtain literature on unusual subjects from the latter.

The services which we hope soon to be able to install are in nursing, administration and anesthesiology.

The details of organization of the various services are put into operation after being presented to and discussed by a committee of representatives of the hospitals involved, each being represented by a staff physician, the superintendent and a member of the lay board. This assures interested cooperation and a practical appraisal of local problems.

As indicated above, the community hospitals surrounding Lewiston are easily accessible. But this is not essential. If the community hospitals were scattered as far distant as two hundred miles from

the subsidiary center, it would be necessary to alter our present arrangements only so far as they concern the x-ray program. In fact, such a modified plan is at present being developed in Bangor, where the Eastern Maine General Hospital will serve as the regional center to several affiliated hospitals in northern Maine.

It is clear that the medical-school–hospital center is utilized only to the extent to which it can give special aid to the regional center and community hospital. For example, by employing the professor of pathology at Tufts College Medical School only in cases where his special knowledge is required, we can supply to each of the six community hospitals around Lewiston the fullest benefit of his experience; yet in the course of a year he would be required to devote no more time to the Lewiston and the six community hospitals than would be demanded were he to offer a full service to only one of them. Where the community hospitals have had no pathologist because they could not afford one, they now have, in effect, two—in Lewiston and in Boston. And whereas the pathologist in the regional center has had less work than he could comfortably handle, and unsatisfactory opportunities for the stimulating association with an academic center, he now has greater material to work with and regular channels for academic contacts. To the extent that the regional center can carry on its own work, therefore, it is given the fullest stimulation and help.

The program is intended to make possible more and better medical work by physicians in smaller communities. It is not intended to stimulate these physicians to send more patients to metropolitan centers. As an example, instead of urging that a patient on whom an electrocardiogram might be desired be sent from a small community to a large center where such a tracing could be better interpreted we urge that electrocardiograms be made in the small communities, but under conditions that compare favorably with those in the large center. It is our purpose, in the case of community hospitals, not to take over their activities, but to make it possible for them to utilize more effectively what services they already offer and to supply additional services under the most favorable circumstances.

POSTGRADUATE INSTRUCTION

It is clear that a program which offers opportunities for the fullest effective utilization of technical facilities of hospitals of various sizes and does nothing to make possible the intelligent utilization of those facilities by the physicians is unbalanced. Hence the obvious need for postgraduate instruction to practicing physicians, which naturally represents a major aspect of our undertaking.

The ultimate adequacy of the medical care which can be made available to the majority of the people of this country will be a measure of the adequacy of the physician who administers that care, namely the general practitioner. All plans, therefore, aiming to provide the best medical care should concern themselves with the problem of improving the capabilities and the adequacy of those who are to supply that care, namely with postgraduate education.

The problems of graduate and postgraduate instruction have received much attention, both here and abroad. As applied to practicing physicians, such instruction in general concerns itself with the training of specialists or the giving of "refresher" courses for general practitioners. Our present interest is confined to the latter type of instruction, and more particularly as concerns practitioners in relatively small communities. To such physicians, instruction may be supplied through meetings which they organize and conduct, clinics conducted by well-qualified guest physicians (medical society meetings may also be placed in this category), and courses given in a recognized academic institution.

Our experience indicates that a well-rounded program should include some of each of these forms of instruction, since no one alone appears self-sufficient and satisfying. Unquestionably, each has real value. In addition to offering aid in the first two kinds of instruction, as a result of which we are enabled to maintain continued academic contact with most of our postgraduate students, we have for several years given at the New England Medical Center, through Tufts College Medical School, courses of one month's duration covering the general aspects of medicine. The course is specifically designed for general practitioners. During the past year, courses have been instituted in obstetrics and gynecology and in pediatrics. These also are of one month's duration.

Because it is recognized by the Bingham Associates Fund that the burden of the cost of postgraduate instruction is too great for many general practitioners, fellowships are offered for the one-month courses at the New England Medical Center, carrying a stipendium of $250, and there is no tuition fee. These fellowships have as yet been offered only in Maine. In addition, shorter courses of one week's duration are now given in such more limited fields as allergy, gastroenterology, endocrinology and cardiology. For these, no tuition fee is charged to the physicians of Maine; to other physicians, the charge is nominal.

Unquestionably, a short period of postgraduate study can be very stimulating and informative. However, if there is no continued contact between the student and the teaching institution, it is inevitable that the former soon drifts back to his previous habits of thought and action. This is especially true when, as so often happens, postgraduate instruction serves simply to emphasize the inadequacies of the student's local facilities for practice, inadequacies about which he can do nothing. Factual medical information is so vast that the acquiring of a few facts in a short period can hardly be of great value. Such static training is as evanescent as the very "facts" which it imparts.

This situation, which represents one of the defects in the program of most teaching institutions, may be regarded as one of the fundamental factors to be taken into consideration in the planning of any program of postgraduate instruction. The program must provide for "dynamic" instruction, which means essentially repeated and continued instruction. Postgraduate instruction is thought to be necessary for the very reason that medical knowledge is not stationary, and that the training acquired in the medical school constitutes little more than a preliminary grounding in the principles of medicine and in habits of thought. A single or occasional postgraduate course would have the same inherent defects, and more strikingly so, as has the regular course in medicine: each would offer only a temporary and fixed picture of medicine, when as a matter of fact the problems of medicine are notably neither temporary nor fixed. In the planning of our program, this factor has been duly considered, as already indicated, and it is our purpose more and more to increase the opportunities for continual instruction.

A second basic fact to be considered in planning postgraduate instruction in a teaching institution, a fact which has also too often been disregarded, is that the attitude of the practicing physician toward an institution of learning is entirely different from that of an undergraduate. The latter is forced willy-nilly to apply himself to an intensive program of education, else he must abandon his profession and his choice of a means of livelihood. Under these circumstances, he must study, because he must pass certain requirements. The practitioner, on the other hand, is not so unhappily situated. Only his own desire for knowledge prompts him to take advantage of opportunities for postgraduate instruction, and once he becomes a postgraduate student, only the intensity of this desire will influence the seriousness with which he applies himself to a period of self-improvement.

Apparently, there are relatively few who are inherently eager for education except as a means to an end, and where no strong outside stimulus exists, a large number of practitioners cannot be expected to seek instruction of a more general character; by this is meant instruction which does not directly and obviously lead to new opportunities for increasing revenue from practice. A physician may, for example, spend a week taking a course in electrocardiography in preference to a general course in cardiology, because the former offers a more definite means of earning money than does the latter. The desire to better oneself financially is probably at least as strong and as widespread as the urge for educational improvement. The economic is at least as great as the moral drive.

So long as a physician's livelihood depends on the practice of medicine, just so long will financial considerations play a part in many aspects of his work. This is inevitable and cannot be condemned, unless the practitioner is freed from financial cares. This fact must be recognized and its implications used as a guide to the practical arrangement of work.

At this point, it may be well to direct attention to certain other problems which arise when teaching of practicing physicians is done, as is so often the case, in an institution where the primary emphasis is on the routine care of cases, the secondary emphasis on instruction for undergraduates, and the least emphasis on instruction for postgraduates. Too often graduates are made to feel that their courses are comparatively unimportant so far as the school or hospital is concerned, and they may leave as much strangers to the institution and with as little knowledge of it as when they arrived. This situation we have made a sincere effort to overcome. We have arranged the postgraduate student's work so that it is integrated with that of the institution. He becomes a part of our organization and is so treated by the staff and instructors. Under such conditions, we have found that our approach is decidedly easier and more effective. This feature of our teaching is now even more pronounced, since the postgraduate students live in the resident quarters on the hospital grounds.

In addition to making the postgraduate student throughout his stay with us an important and integral part of our organization, we have emphasized, as an aid to more effective teaching, an informal approach. During only one hour of the daily eight-hour schedule is he subjected to a for-

mal or didactic presentation. Informal teaching is possible only with small groups; hence our courses are limited to six physicians. Because of the natural variability of special interests, we have allowed for some degree of flexibility in subject matter. We believe it will be possible to bring about a more or less automatic state of continual education for most, if not all, of the physicians attached as staff members to the affiliated hospitals.

A postgraduate program, such as is being developed at the Joseph H. Pratt Diagnostic Hospital through Tufts College Medical School, seems particularly purposeful, being, as it is, continuous and progressive, and emanating from a source with which a permanent attachment is established locally through community hospitals, and centrally through a clinical medium for the management of difficult problems. The whole exists primarily for the benefit of the general practitioner, who may, if he wishes, use it as his own for the purpose of making available to himself, in a continuous manner, more opportunities to practice better medicine.

The final approach to the general practitioner is through his community hospital, which serves as the local base for this broad educational program. Without such a base, the educational approach from a school to the physician is beset with all sorts of difficulties, particularly as regards the establishment of a self-perpetuating and permanently functioning program.

GENERAL DISCUSSION

The scientific and technical advances of modern medicine, because they demand specialization and elaborate equipment, are by and large effectively applicable only through hospital or clinic facilities. Herein lies the basis for the development of so-called group practice, which is essentially clinic practice. It is our opinion that, at least so far as the general practitioner in a small community is concerned, the soundest basis for handling the needs which have given rise to the demand for group practice is a community hospital. With the opportunity to utilize, when necessary, a well-equipped and adequately functioning community hospital, the informed general practitioner can give entirely satisfactory medical care to most of his patients. If, in addition, he has facilities for easy access to help when, again, through being well informed he recognizes the need for such help, he can truly be said to be able to offer to his patients the most complete and the best available medical care. Hence the necessity for an educational program, so that the physician will be well informed; the hospital extension service, so that his hospital will function adequately; and graded medical centers, for the handling of special problems.

There remains the problem of supplying adequately equipped hospitals. This we are financially unable to do, but we are encouraged by the fact that poorly equipped hospitals are often willing to improve their physical equipment if they are given the opportunity to make good use of these improvements. Thus, when the electrocardiographic service was offered, several of the affiliated hospitals bought electrocardiographs; and when the laboratory service was offered, several arranged to set up extremely well-equipped laboratories, whereas previously they had had practically no equipment.

Incidentally, as the hospitals of various sizes themselves are enabled to do more and better work their income can be expected to increase. When the Rumford Community Hospital can have an electrocardiogram made, or a special x-ray procedure carried out, on a patient who previously would have had to be sent some distance for such work, this hospital can expect to receive for this work the money which, also, would have gone elsewhere. For this reason, at least some of the program of hospital extension activities can be expected to be self-supporting. At present, the complete program is being almost entirely subsidized by the Bingham Associates Fund.

The hospital extension services are a natural development of the postgraduate teaching program. These services were begun after it became evident that in order to make postgraduate instruction more worth while, the physicians must utilize, in their own community hospitals, diagnostic and therapeutic aids which had been demonstrated as being valuable. Postgraduate instruction is incomplete if physicians are taught how to apply intelligently and utilize such aids, and then left with no means for securing them. In following treatment with sulfanilamide there would be no advantage in giving instruction as to the value of estimating the level of this drug in the blood unless facilities were made available in the postgraduate student's local community for such determinations. Our purpose is to make it possible for physicians practicing in small communities to be able to make more valuable their period of postgraduate study at the New England Medical Center by making locally available to them facilities which were of demonstrated practical value. Their own community hospitals can thus serve to continue the benefits of their instruction.

It is natural to want to be near one's home and family when one is sick. The fact that there has developed a tendency for patients to go from small communities to large centers for medical attention

is unquestionably due to lack of faith in the existing medical facilities in the former. If a patient living in a small community knew that local facilities were adequate for taking care of most of his illnesses, and that, on such rare occasions when his condition demanded special attention, he would more or less automatically be sent to an affiliated institution functioning solely to handle such problems, he would be less tempted to leave his community for medical help, except when it was really necessary, and then only at the suggestion of his family doctor.

There is an unfortunate tendency for patients, especially in large communities, to lose sight of the great importance to themselves of having a physician who can serve in the traditional capacity of a true family doctor. In general, the benefits to the patient which result from a patient-and-family-doctor relation are the greatest of all medical benefits. It is only through this association that the conditioning effects of background and environment can be fully evaluated. The family doctor knows his patient as no other doctor knows him. It is he who should decide when a specialist is to be consulted, or whether it is necessary or desirable for the patient to leave home for medical care.

When in the not too dispassionate discussions of medical economics, today, reference is made to the great importance of maintaining the patient-doctor relation, what we really have in mind is that between the patient and the family doctor. That of a patient to a specialist or a full-time clinic or hospital physician can, at best, never be very personal or fully satisfying, in the sense that the relation of such a patient to a family doctor can be. Every patient should have a medical base, through which all his medical benefits derive, and that base should be the family doctor. A patient with no attachment to such a base is needlessly, and often dangerously, stranded. This important fact has been given prime consideration in the development of our program, a program which, recognizing that the fundamental basis of all medical practice is the patient-and-family-doctor relation, is designed to strengthen it and make it more effective.

In the foregoing there have been presented certain general principles, as well as the initial details of development in their direction. It is to be emphasized that the entire program of development has purposely been left very flexible. The scope of the work is being gradually broadened and extended only as it appears to meet the needs and desires of those concerned. Individuals and local situations are given the greatest possible consideration. Practicable suggestions are constantly welcomed and developed. Everyone concerned, being under no obligation whatsoever, is free at any time to accept or reject whatever he pleases. New steps are taken only when there is assured and mutual co-operation. On such principles rests the development of the program. To such purposes is the new Joseph H. Pratt Diagnostic Hospital dedicated.

SUMMARY

The Joseph H. Pratt Diagnostic Hospital is intended to further the medical program of the Bingham Associates Fund. An attempt is made to describe in a general manner the present status of the work of the Bingham Associates Fund, through the New England Medical Center, in the extension of medical benefits to small communities, and to indicate the direction of further progress.

At present the work is divided into three main divisions: diagnostic aid, hospital extension services and postgraduate education.

The plan is broadly designed to extend into small communities the medical advantages of a metropolitan center by direct and indirect contacts between these elements, arranged on a permanent working basis. The indirect contacts are through strategically located regional centers. It is intended that the communities concerned maintain full opportunities for independent work but that this work be integrated with that of the metropolitan and regional centers. In this manner it is hoped that there will be established regular and directed channels for the quick and effective passage of medical developments from large medical centers to small communities.

30 Bennet St.

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FACTORS INVOLVED IN THE STABILITY OF THE THERAPEUTIC EFFECT IN THE METRAZOL TREATMENT OF SCHIZOPHRENIA*

Report of 146 Cases

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FROM the data already available in the literature the significance of various factors involved in the determination of the efficacy of Metrazol treatment in schizophrenia has been pointed out. In general it has been found that the shorter the illness and the younger the patient the more likely he is to benefit by treatment.[4-6] There is some evidence also that the type of schizophrenia may be significant in this respect. The catatonic and the paranoid-hallucinatory types are more favorably affected than is the hebephrenic.[6] It is the purpose of this report to present further data concerning these variables and to indicate the significance of some factors in the prognosis after treatment has ceased.

The following data are based on observations made on 146 schizophrenic patients. Of these, 38 were men and 108 were women. None of the patients showed evidence of any physical disease. Each patient was treated with Metrazol in the same fashion. The initial dose was 3 cc. of 10 per cent Metrazol (Bilhuber-Knoll). All injections were intravenous. Treatment was administered daily, the dose being increased by 1 cc. until a convulsive threshold was reached and thereafter maintained at that level. Preliminary hydration and alkalinization were not carried out, these having now been shown to be unnecessary.[1, 3] Treatment was discontinued when further improvement seemed improbable. This is admittedly an arbitrary criterion which rests entirely upon clinical judgment; however, there are no data available as yet which prove what the optimal number of seizures may be for schizophrenics as a group nor what factors must be considered in the determination of individual variations in this respect. In some of the patients repeated courses of treatment were necessary, as will be shown in the tables.

The clinical status for each patient was rated at specific time intervals after the cessation of treatment. Judgments were made at the end of treatment, and two weeks, one month, two months, four months and six months later. For many of the patients data are available for periods over a year, but in order to have a sufficient number of cases upon which to base conclusions the present report is not concerned with outcome beyond the six-month period following treatment. Only the outcome after six months will be presented, since data with regard to shorter periods are already extensively available and do not appear to contribute very much to the elucidation of the problem.

*From the Research Service of the Worcester State Hospital.
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RESULTS

Data are presented covering the therapeutic outcome for all cases six months after treatment, the significance of sex differences, of differences due to the diagnostic types of the disease, of differences due to the patient's age, of differences due to the duration of hospitalization and of differences due to the duration of illness, and finally a comparison of the outcome after six months with that after one month.

Therapeutic outcome was judged and classified under five headings as follows:

A. *Complete remission.* Remission was considered to consist of complete freedom from all symptoms, the ability of the patient to leave the hospital and resume his former occupation and the absence of any observable peculiarities. In other words, the patient's condition was considered to be that of a full remission only if he again became the same person, so far as could be recognized, as he had been before his illness.

B. *Marked improvement.* In this group, symptoms had disappeared almost entirely, residual symptoms being such that they did not interfere with an adequate social adjustment. For example, a patient who manifested some shallowness of affect or relatively inconspicuous mannerisms would be considered to have shown much improvement if his condition were such that he could go home, or enjoy full parole privileges. The continued presence of hallucinations, delusions or severe activity disturbances would exclude any patient from this group, however much improvement might occur in his social adjustment in the hospital.

C. *Some improvement.* In this group were patients in whom such modification of symptomatology occurred that a better institutional adjustment became possible. In no case were these patients well enough to go home, although some

were granted parole privileges. Improvements in this group were generally monosymptomatic or affected only very few symptoms; for example, activity disturbances such as excitement or stupor might disappear; hallucinatory experiences might become less vivid and as a consequence less harassing to the patient; delusions might show some change, although this was not frequently observed in patients in this group. Generally the ameliorated institutional adjustment was such that the patient became capable of doing some productive work, which had formerly not been the case.

D. *No change.*

E. *Aggravation of symptoms.* In this group, activity disturbances supervened and were so severe that institutional adjustment became quite poor. All these patients manifested excitements which necessitated sedation and other measures of restraint.

In Table 1 there is presented the outcome for all cases six months after treatment, and also the outcome by sex. It may be seen from this table that 21 patients (14 per cent) manifested complete remissions, and 9 (6 per cent) were much improved. The remaining 116 patients (80 per cent) showed some improvement, no change or became worse. Thirty patients (21 per cent) had been given one or more additional courses of treatment during this six-month period, and 3 had died.

TABLE 1. *Outcome after Six Months for All Cases and According to Sex.*

Outcome	Women		Men		All Cases	
	No. of cases	Per cent	No. of cases	Per cent	No. of cases	Per cent
A	17	16	4	10	21	14
B			9	24	9	6
C	24	22	8	21	32	22
D	37	34	10	26	47	32
E	4	4			4	3
Re-treated	24	22	6	16	30	21
Dead	2	2	1	3	3	2
Totals	108		38		146	

The therapeutic outcome by sex was as follows. The small number of men patients (38) cannot be adequately compared with the number of women patients (108), but there is some indication that the former may do somewhat better. No statistical validity, however, is attached to this observation.

A remission rate of 14 per cent under treatment in schizophrenia does not seem at first glance to be of any significance. The spontaneous remission rate is approximately this figure, and by some investigators has been shown to be even slightly higher. However, when one considers the large number of chronic patients in this series, the efficacy of Metrazol treatment in the determination of the remission and improvement rate seems to be greater than might have been expected if the patients were untreated. (This point is made clear in a consideration of Tables 4 and 5.)

In Table 2 the therapeutic outcome after six months as related to the type of schizophrenia is presented. It is shown that in the group there were 31 paranoids, 50 hebephrenics, 40 catatonics, 20 patients of "other types," and 5 classified as "simple." Of the catatonic group 20 per cent manifested complete remission and of the paranoid 13 per cent. The hebephrenics had a 10 per cent remission rate and "other types" 15 per cent. From a statistical standpoint it must be stated that no differentiation of the results of therapy in these types can be observed. In this series the catatonic patients have an average duration of illness which is shorter than that of the paranoids. Since it will be shown here that the shorter the illness the better the outcome, the differences between the catatonics and the others cannot be considered significant purely on the basis of type. Furthermore, the number of cases in each group is not large enough to permit ascribing differences in outcome to type to the exclusion of other factors, for example the duration of illness.

In Table 3 the outcome as related to the patient's age is presented. It seems clear from this table that the outcome is better if the patient is under thirty (remission rate 21 per cent) than if he is older, but that a fair number of remissions (14 per cent) are possible in the age range of thirty to forty. In the age range of forty to fifty the outcome must be considered much more pes-

TABLE 2. *Outcome According to Diagnostic Type.*

Outcome	Paranoid		Hebephrenic		Catatonic		Other Types		Simple
	No. of cases	Per cent	No. of cases	Per cent	No. of cases	Per cent	No. of cases	Per cent	No. of cases
A	4	13	5	10	8	20	3	15	1
B	1	3	3	6	3	8	1	5	1
C	10	33	12	24	5	12	3	15	2
D	9	29	18	36	13	32	6	30	1
E	1	3	1	2	2	5			
Re-treated	5	16	10	20	8	20	7	35	
Dead	1	3	1	2	1	3			
Totals	31		50		40		20		5

simistically (remission rate 6 per cent). Since the patient's age is intimately associated with hospital age and duration of illness, the therapeutic outcome as related to these variables must be considered. These data are presented in Tables 4 and 5, which should be studied together with Table 3 in the evaluation of Table 1 shown above.

TABLE 3. *Outcome According to Age.*

Outcome	Under 30 Years		30–40 Years		40–50 Years		50 Years and Over	
	No. of cases	Per cent	No. of cases	Per cent	No. of cases	Per cent	No. of cases	Per cent
A	12	21	7	14	2	6		
B	7	12.5	1	2	1	3		
C	7	12.5	10	20	12	39	3	30
D	17	30	13	27	12	39	5	50
E	1	2	2	4	1	3		
Re-treated	10	18	15	31	3	10	2	20
Dead	2	4	1	2				
Totals	56		49		31		10	

TABLE 4. *Outcome According to Duration of Hospitalization.*

Outcome	Under 1 Year		1–3 Years		3–5 Years		5 Years and Over	
	No. of cases	Per cent	No. of cases	Per cent	No. of cases	Per cent	No. of cases	Per cent
A	19	37	2	7				
B	3	6	2	7	1	4	3	7
C	8	16	11	39	5	21	8	19
D	9	17	9	32	10	42	19	44
E	1	2	1	4			2	5
Re-treated	10	20	3	11	7	29	10	23
Dead	1	2			1	4	1	2
Totals	51		28		24		43	

As was indicated in the discussion of Table 1, a remission rate of 14 per cent for all cases after six months was found. In Table 4 one may observe that the remission rate is 37 per cent in patients who had been hospitalized less than one year, 7 per cent in patients hospitalized one or two years, and none in patients who had been hospitalized for longer periods. On the other hand, of the entire group only 51 patients (35 per cent) had been hospitalized less than one year. The lowness of the remission rate for all cases may therefore be ascribed in part to the prevalence of cases with a high hospital age. Furthermore, when these data are considered together with those of Table 5, greater support is lent to this suggestion. In this table it may be seen that only 22 patients (15 per cent in all) had been ill less than one year; the remission rate for this group is 59 per cent. Although data on spontaneous remission rates are not available for patients who have been ill less than one year, I am of the opinion that a figure of 59 per cent is well above that which might be expected for this group.

The above tables show generally what has previously been observed by other investigators, namely that the shorter the duration of illness, and, concomitantly, the younger the patient and the shorter his hospital age, the better is the therapeutic outcome with Metrazol treatment.

The question arises as to what prognostic opinion may be attached to given patients after the cessation of treatment. It is a common practice, for example, for investigators in this field to state frankly to the patient's relatives that although the immediate change might be beneficial, how long it will last is another question. The following data throw some light upon this question. In Table 6 there are presented data which compare the patient's status six months after the cessation of treatment with that one month after the cessation of treatment. The status one month after the cessation of treatment rather than immediately afterward has been taken in order to eliminate cases with short-lived changes, and also to include patients whose condition may improve within the first month after cessation of treatment.

Several facts stand out in this table. The most striking seems to be that of the 18 patients who underwent complete remission, 16 (89 per cent) enjoyed this status six months later. Of the 40 patients who had shown much improvement, 4 attained complete remission and 8 maintained their improvement, largely due to the fact that most of these patients had had subsequent courses of treatment. These 12 patients comprise only 30 per cent of the B group; hence of the 40 patients who had shown much improvement, 70 per cent had relapsed. Of the 54 patients who had shown some improvement, 17 (31 per cent) had main-

TABLE 5. *Outcome According to Time from Estimated Onset.*

Outcome	Under 1 Year		1–3 Years		3–5 Years		5–10 Years		10 Years and Over		Unknown
	No. of cases	Per cent	No. of cases	Per cent	No. of cases	Per cent	No. of cases	Per cent	No. of cases	Per cent	No. of cases
A	13	59	1	5	3	14	2	6	1	2	1
B	2	9			1	5	6	18			
C	4	18.5	10	56	6	29	4	12	6	14	2
D	1	4.5	3	17	8	38	11	33	21	48	3
E	1	4.5	1	5					2	4	
Re-treated	1	4.5	3	17	3	14	8	25	14	32	1
Dead							2	6			1
Totals	22		18		21		33		44		8

tained this status without change but the rest (69 per cent) had relapsed. Of the 31 patients who had shown no change, 1 achieved a complete remission and 2 showed slight improvement, but 90 per cent had not changed their status. It is of interest that of the 3 patients who were worse one month after treatment 2 improved without retreatment. On the basis of this sample it would appear, therefore, that the patient's outcome six months after cessation of treatment may be predicted from his outcome one month after treatment; if he has achieved full remission, his chances of remaining well are great (in our sample, 89 per cent), but if he has fallen short of full remission the chances of maintaining his improvement are relatively small (in our sample, 30 per cent). The conclusions may therefore be drawn that in the evaluation of Metrazol therapy one must consider that only those patients who become *completely* well will so continue, and that patients who do not become completely well have only a third as good a chance of retaining even the considerable improvement which they may have manifested immediately after cessation of treatment.*

The data of Table 6 may lend support to some general considerations concerning the nature of the schizophrenic process. It appears from these data that in most cases recovery can be maintained only if the schizophrenic symptoms can be removed in toto. Conversely, if there remain any residual symptoms the probability of relapse is high. These statements may indicate that the schizophrenic disease process is an "infiltrating" one, analogous, perhaps, to neoplastic processes. One might push the analogy further and suggest that in the early stages the process may be relatively benign and with treatment can be effectively removed from the personality, but that when malignancy of the nature of personality infiltration has occurred, the outcome is gloomy. The fact seems clear that if the patient becomes completely well after treatment his chances of remaining well are excellent, and it is only by the criterion of full remission that the potency of Metrazol, with respect to the stability of improvement, can be measured.

*From an administrative standpoint the fact that about a third of the patients retained an ameliorated hospital adjustment after six months should, however, be emphasized.[3]

TABLE 6. *Outcome One Month after Treatment as Compared with That Six Months after Treatment.*

Six-Month Rating	One-Month Rating: A		B		C		D		E	
	No. of Cases	Per Cent	No. of Cases	Per Cent	No. of Cases	Per Cent	No. of Cases	Per Cent	No. of Cases	Per Cent
A	16	89	4	10			1	3		
B			8	20					1	
C	1	5.5	11	27.5	17	31	2	7	1	
D	1	5.5	6	15	16	30	24	77		
E			1	2.5	1	2	1	3	1	
Re-treated			10	25	18	33	2	7		
Dead					2	4	1	3		
Totals	18		40		54		31		3	

pointed out, that therapeutic results are better in young patients with a short hospital age and a brief duration of illness. Differences due to diagnostic type or to sex could not be demonstrated. It was found that the stability of the therapeutic effect, as compared one month and six months after cessation of treatment, depended largely on whether full remission had occurred. For those patients who achieved full remission, 89 per cent remained in this fortunate state after six months. On the other hand, of those patients who had shown much or slight improvement after one month, only 30 per cent retained the improvement after six months. The conclusion may therefore be drawn that anything short of a full remission must be considered pessimistically, so far as this therapy is concerned, with respect to ultimate clinical status, although amelioration of the patient's institutional adjustment may, in about one third of the cases, be expected to persist.

SUMMARY AND CONCLUSION

Data have been presented on the therapeutic outcome after six months in 146 schizophrenic patients in whom daily treatment with Metrazol had been carried out. It was shown, as others have pointed out, that therapeutic results are better in young patients with a short hospital age and a brief duration of illness. Differences due to diagnostic type or to sex could not be demonstrated. It was found that the stability of the therapeutic effect, as compared one month and six months after cessation of treatment, depended largely on whether full remission had occurred. For those patients who achieved full remission, 89 per cent remained in this fortunate state after six months. On the other hand, of those patients who had shown much or slight improvement after one month, only 30 per cent retained the improvement after six months. The conclusion may therefore be drawn that anything short of a full remission must be considered pessimistically, so far as this therapy is concerned, with respect to ultimate clinical status, although amelioration of the patient's institutional adjustment may, in about one third of the cases, be expected to persist.

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LEGISLATIVE PROCEDURE*

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THE Massachusetts legislature and that of Iceland are the only two truly democratic legislatures left in the world. The Massachusetts Legislature used to be called the "Great and General Court for the Redress of the Grievances of the Common People." It is now called the "General Court," and while it has never been known as such in the literal sense, it has always been thought of as a court which sits in public to listen to grievances and to remedy them, through the enactment of legislation. Hence the use of the more common name, the Legislature.

Our procedure is very different from that of other states in that it contains the elements of true democracy that none of the others have. For example we have the constitutional right of free petition, which guarantees to every citizen the right to draft and sign a petition, accompany it by a bill, resolve or resolution explaining the legislation sought, no matter how ridiculous, and have it presented to the Legislature by requesting a representative or senator to place his name on the back of the petition blank. The legislator, however, can indicate that he personally does not necessarily sponsor the provisions of the measure, by adding after his name the words "by request."

The number of petitions presented every year, considering this tremendous leeway, is small, but even a small number consumes a great amount of time when one considers the many channels through which, under the rules, a measure must pass and the careful scrutiny it receives before it is enacted into law. This year, we have before the General Court the largest number of measures ever filed—approximately twenty-five hundred; this number includes state departmental reports with recommendations for legislation, and reports of about twenty legislative recess commissions, representing studies made during the recess of last year. Under the rules, all proposals for legislation are required to be filed on or before the second Saturday following the date of convening of the session.

A petition for legislation, after being presented to the legislative clerks, is referred by them to a committee, subject to the approval of the presiding officers of both branches. There are twenty-nine joint standing committees which are appointed by the president of the Senate and the speaker of the House. The petition is then assigned a date for a public hearing, and a clerk sends a postcard notice to the legislator who introduced the measure and to the petitioner seeking the legislation and to anyone who has requested a notice. A large amount of money has been saved in recent years by discarding the custom of the wholesale advertising in the newspapers of the date of a hearing on a petition. The rules state that when a petitioner can be reached by written notice, no such advertising shall be used. It is important that anyone who has any interest in a pending petition should notify the clerk of the committee to which it has been referred at an early date so that he may be notified of the hearing date.

The *Legislative Bulletin* publishes a list of all matters as they are referred to committees, showing the number and title of the petition and the date of the hearing. This bulletin later carries the action of the committee, an index of all matters referred to committees and a running record of what happened to each measure at every stage of its progress through the House and Senate, action by the Governor and the chapter number assigned if it becomes a law.

The bill, resolve or resolution accompanying the petition or the report is printed. Under the rules, nine hundred copies of each measure are printed for the use of the Legislature, and copies may be obtained by the public at the Legislative Document Room on the fourth floor of the State House.

At the public hearing, the committee usually hears persons in favor of a proposal first, and those in opposition afterward. Some hearings have been known to last over a period of six weeks, as in the case of a proposal to remove a judge, while others last only a few minutes. As a general rule petitioners are allowed ample opportunity to present their case, it being the function of the committee to give a fair, adequate and complete hearing to all who are interested in the measure.

After the hearing on a measure has been completed, the committee goes into executive session to determine what recommendation it will make to the Legislature with reference to the disposition of the petition, or other subject of legislation. The sessions of almost all other legislatures are limited to sixty or ninety days. In such states, they may pigeonhole or table proposals for legislation, or let

*An address given at the annual meeting of the Massachusetts Central Health Council, Boston, February 16, 1939.

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matters die in committee. Under this procedure, a bill never sees the light of day unless a committee selects it as one on which they wish to make a report. The same procedure is followed in Congress. But in Massachusetts, when prorogation takes place, every measure must have been reported upon.

There are a number of technical reports a committee can make, but in the main they fall into one of two classes — favorable or unfavorable.

If a petition, accompanied by a bill or resolve is reported adversely by a committee, it is placed on the calendar in the branch in which it was reported and any member has the privilege of moving substitution of the bill or resolve and of getting a roll-call vote on it, providing he can get thirty members to join in the request. If the petition is rejected in one branch, it must go to the other branch for concurrence in that rejection.

If a bill or resolve is reported favorably by a committee on a petition referred to it, the measure is first read in the branch to which it is reported, and this is called the First Reading of the bill or resolve. Unless this matter is one that requires reference to some other committee, — such as the Committee on Ways and Means or the Committee on Counties, because it provides for the expenditure of state money or is a county matter, — it is placed in the orders of the day for the next legislative day, without debate, for a second reading. At this stage it is debatable, and can be amended or rejected. If rejected, being a bill, it is dead, and does not go to the other branch. If ordered to a third reading, it is referred to the Committee on Bills in the Third Reading of that branch. This committee is a highly technical one and has a staff of legal experts attached to it. Its sole function is to see that the bill has been "correctly drawn," that is, that its provisions are not unconstitutional and that its legal phraseology is correct, and to redraft it, if necessary, in such a way that it will fit into the form of the General Laws. The only report that this committee can make is that the bill has been correctly drawn, or to suggest an amendment in order to clarify the wording, and if it sees fit it can recommend that it ought not to pass. In other words, it cannot make substantive changes.

When the report of the Committee on Bills in the Third Reading appears on the calendar, the question before the branch considering it is, Shall the bill be passed to be engrossed? At this stage it can again be amended or rejected entirely, and if it is, it does not go to the other branch. If the measure is passed to be engrossed, it is held one day so that any member may exercise his right to ask for reconsideration, and it is then sent to the second branch, where, after its first reading, it takes the same course that it took in the first branch.

If the second branch amends the bill in any particular, it is returned to the first branch for concurrence in the amendments. If it substitutes a new bill, that bill is sent to the first branch and it goes through the same process as if it never had been considered by it, namely three readings. If the two branches do not agree in the amendments made, and neither will recede from its decision, a committee of conference is appointed as in other cases of disagreement, and its recommendations are usually accepted. If the branches still cannot agree another committee on conference may be appointed; but usually not more than three such committees are appointed, and the measure, for want of agreement, dies between the branches.

After a bill has been passed to be engrossed in both branches, it is sent to the Secretary of State's office and is engrossed on parchment paper with a special typewriter. This copy must be accurate, as it is the authentic document, which is reported to be "rightly and truly engrossed" by the Committee on Engrossed Bills.

The bill is then enacted, first in the House, and then in the Senate after which it is sent to the Governor. Under the Constitution, the Governor is allowed five days to act on the measure. If he signs a bill involving general legislation, it becomes law in ninety days, under the provisions of the constitutional amendment regarding the initiative and referendum unless it has an emergency preamble, when it takes effect at once. If the Governor takes no action within five days, the bill becomes a law automatically, but he may veto a bill by returning it to either branch with his objections, and if two thirds of the members of both branches vote to override his veto the bill becomes law, notwithstanding his objections.

The House and Senate journals record every stage of action by both branches on a petition for legislation up to and including the moment it receives the signature of the Governor.

This, briefly, is the procedure followed with regard to proposals for legislation to the General Court.

From the point of view of the layman, this procedure is important. Unless rules are suspended for an emergency, from two to three weeks are required, after a committee has reported on a measure, for it to get to the Governor's desk. During this period of time popular sentiment can be aroused either for or against the measure.

There are differences of opinion as to what in-

fluences the legislator in making his decision before voting on legislation. The more I have seen of the legislative process, the more I am convinced that outside agencies studying legislative problems and making analyses are responsible for more legislation than are the legislators themselves. It would be absurd to assume that a legislator could vote on twenty-five hundred matters without seeking advice. In most cases, the committee is swayed by individuals whose judgment it respects. Almost all legislative bodies act as a result of the pressure of various forces. There are always proponents and opponents. The legislator is torn between the two, and when, through lack of facts at his disposal, he is incapable of forming an independent decision, he must rely on the judgment as well as the wishes of the district from which he comes.

You hear much about lobbyists. They are a useful group to a legislator. They are, to be sure, hired by some organization. They register themselves, under the rules, as paid lobbyists, and they give the member more real information on a given subject than he could easily get elsewhere. That is their business. They try to give you facts, and if at all experienced as lobbyists, they know that it is dangerous to supply you with wrong data because it will hurt them. It is the lobby group from which the members get more information than from any other. For example, Dr. Blank is a lobbyist. He is registered as representing a definite organization. He is a good lobbyist because of his accurate information and his good judgment. Unfortunately, the term "lobbyist" is applied to everyone who tries to influence legislation. They are not all equally useful. There are a good many different ways of lobbying — that is, different technics.

You in this organization have much greater strength than you realize. If you appeal to the intelligence of the community in which the individual legislator lives you can exert a tremendous influence, whether you realize it or not. In any man's district, two groups have great influence — the church and the medical and nursing professions. This is because both groups have contacts with many people and have many opportunities for spreading respected word-of-mouth opinion.

State House.

TUBERCULOSIS OF THE SYMPHYSIS PUBIS

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MIDDLEBORO, MASSACHUSETTS

TUBERCULOSIS of the symphysis pubis has been reported on a few occasions in the English literature but more frequently in the foreign journals. However, it is still considered too infrequent to warrant its description in either orthopedic textbooks or systems of medicine.

Bean,[1] of Salem, Massachusetts, in 1930 described a case encountered in his practice and comprehensively reviewed the literature written on this subject up to that time. Practically all the preceding reports appeared in foreign journals. Since then no other reports on this subject have appeared in the English literature although one quite frequently encounters descriptions of injuries and osteomyelitis of the pubic bone. In this paper I shall report 4 cases of tuberculosis of the symphysis pubis, treated at the Lakeville State Sanatorium, describe the commoner symptoms and findings and discuss in detail the operative procedure followed in 2 of the cases, namely surgical fusion of both sacroiliac joints.

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The commonest symptoms encountered, according to most authors,[1] are an irregular gait, a tumor mass and pain in the region of the pubis. Many of the earlier reports emphasize an irregular or painful gait as the chief complaint. The chief symptoms our cases presented were pain over the pubis, a tumor mass and backache. The tumor mass appears oftenest in the groin or over the pubis. It is frequently mistaken for a hernia or psoas abscess. X-ray films of the pelvis, whenever this sign occurs, may show irregularity or destruction of the symphysis pubis or pubic bone. If an abscess is present, bacteriological study reveals the nature of the infection.

None of our patients showed an irregular or painful gait, possibly because they were seen earlier and before the destruction became very extensive. The first complaint that 2 patients presented was swelling in the groin, 1 had pain in both groins and 1 first experienced pain in the region of the left hip.

All the patients had routine x-ray films taken

of the chest. Signs of inactive tuberculous chest lesions were found in 2 cases. One of these patients had also had a tuberculous kidney removed. One patient had a tuberculous prostate, with a urinary fistula located just above the pubic bone. A fifth case, which was treated here for disease of the symphysis pubis, is not included in the series, as it was ultimately diagnosed as non-tuberculous, because of the repeatedly negative guinea-pig inoculations and Mantoux tests.

TREATMENT

The usual treatment in the past was thorough curettage of the infected bone and drainage of any abscesses present, in accordance with the accepted treatment for osteomyelitis. Thus, many of the earlier reports[1] state that the bone was curetted and the wound cleaned and drained. Unfortunately very few reports include follow-up, and the ultimate result of this procedure is not recorded. Bean treated his case with curettage, and in addition laid a bone graft across the horizontal portions of the pubis. The bone ultimately filled in, but the graft was absorbed. The patient improved and her symptoms disappeared. Jackson[2] in 1923 reported a case of tuberculous symphysis pubis in a girl of eleven who had difficulty in walking and then developed an abscess on the right thigh just below Poupart's ligament. She was treated conservatively and followed by x-ray studies for several years and ultimately showed new bone formation in the diseased area.

The first patient (Case 1) seen at this sanatorium was a Negro of forty-seven admitted in August, 1926. A fusion of the symphysis pubis had been performed at another hospital, a tibial graft being used to bridge the diseased area. Following the operation the wound broke down and drained. X-ray films at this institution showed the graft floating in pus. This sequestrum was removed, and the cavity curetted. Most of the operative wound healed, and the patient was eventually discharged with a small pin-point sinus still draining but with his general condition good.

The next case was that of a white man, aged fifty (Case 2). Having had experience with the previous case, and with the widely accepted clinical fact that bone grafts do not attach themselves favorably in a tuberculous field, we decided that a new method of approach was desirable. It occurred to our orthopedic consultant, Dr. Zabdiel B. Adams, that the pubic bones could be splinted by ankylosing both sacroiliac joints, thus steadying the entire bony pelvic ring.

The pelvic ring is made up of the innominate bones, united in front by the symphysis pubis and joined in back to the sacrum. By elimination of whatever motion may be left at the sacroiliac joints, the motion in the anterior portion is reduced to a minimum. The main advantage of this procedure is that we work in a clean field, whereas the former procedure of curettage and laying down of a bone graft in a diseased field may result in the breaking down of the wound, with resultant formation of sinuses and sequestration of the graft.

This procedure was tried on this patient and also on 2 others, a girl of fifteen (Case 4) and a boy of sixteen. The type of fusion operation is of secondary importance, as the operation is performed in a clean field and on healthy bone, and any type of fusion if efficiently performed will result in ankylosis of the joint. We used both the Smith-Petersen and the Campbell methods.

In Case 4, the fusing of both sacroiliac joints did not at first prove sufficient, and we therefore resorted to the old procedure of curetting the diseased area and laying down a bone graft. Sequestration resulted, and several bone spicules were removed from a suprapubic sinus which developed after the operation. The sinus eventually stopped draining, and the patient was discharged in good condition. She was last seen two years and ten months after her last operation and was in good general condition, free of all symptoms, and with the sinus closed.

Case Reports

Case 1. C. H. A., a 47-year-old Negro, in 1916 developed an abscess in the left groin. It was incised and drained for 1 week. In 1918 a similar swelling developed in the right groin. It remained the same size until 1926, when it became considerably larger. The patient was admitted to a hospital in Boston, where the abscess was aspirated. X-ray films of the pelvis taken at that time showed a destructive lesion in the symphysis pubis, and an ankylosis operation was performed, using a bone graft from the left tibia. Nine days later the wound broke down and began to drain. The patient was admitted to the Lakeville State Sanatorium on August 2, 1926, because of this discharging sinus. The discharge was profuse and was found positive for tubercle bacilli.

X-ray films of the chest showed several calcified nodes in both hili, with infiltration of both apices. Films of the pubis showed a sequestrum of the former bone graft, floating in a field of pus. This sequestrum, along with several fragments of broken-down and frayed dead bone, was removed from the channel where the graft lay, and the cavity was curetted. Most of the operative wound healed and was reduced to a pin-point size. The patient was discharged a little over 2 years after admission, with the sinus still showing a slight amount of discharge. The last x-ray films before discharge showed beginning bony ankylosis of the symphysis pubis and increased calcium deposit. He was in good general condition and free from local symptoms.

Case 2. R. D., a 50-year-old man, had had his right

kidney removed for tuberculosis in January, 1930. At that time he also showed tuberculous infection of the right lung by x-ray study. He was admitted to the Lakeville State Sanatorium on October 18, 1932, because of pain in both groins of 1 year's duration. Examination on admission showed tenderness on deep palpation in both groins. These areas and the region of the symphysis were free from swelling and induration. An x-ray film of the chest showed bilateral apical lesions, and that of the symphysis pubis showed a process in the left pubic bone, apparently inflammatory. In January, 1933, the left sacroiliac joint was fused surgically and in June, 1933, the right sacroiliac joint was similarly fused. The patient made a good postoperative recovery, the symptoms disappeared, and he was discharged.

In December, 1933, he developed pain and swelling over the pubic bone, and in March, 1934, he was readmitted. He showed a lump over the pubic bone the size of a small orange. He was treated conservatively, and the mass gradually became smaller. From time to time an old sinus in the left sacroiliac incision would drain for short intervals. An x-ray of the symphysis showed increased destruction, extending well into the pubic bone on the left side (Fig. 1). The suprapubic mass became smaller and at the time of discharge, April, 1935, it was still palpable deep over the pubis and about the size of a hen's egg.

The patient was readmitted in December, 1937, because of an old sinus over the left sacroiliac incision, which continued to drain at intervals. A few drops of this material was injected into a guinea pig and was found to be positive for tubercle bacilli. The mass over the pubis, which had been present on the first admission, was absent. Most of the complaints were referable to the gastrointestinal tract and were apparently due to an old duodenal ulcer. The patient remained only 1 month, and during that time was free of pain or symptoms referable to the symphysis pubis. The cold abscess was apparently absorbed. X-ray films at the time of discharge (Fig. 2) showed new bone formation with increased calcification and apparent arrest of the destructive process.

Case 3. B. S. was a 57-year-old white man. When the patient was 5 years of age, in 1881, a sister, aged 16, died of pulmonary tuberculosis. The patient had been in daily contact with her. In 1925 he developed lameness accompanied by swelling in the left groin. This mass broke down and drained, and another sinus developed over the pubis. The two seemed connected. The sinus was excised, and the pubic bone was curetted. The suprapubic sinus was later found to be connected with the bladder. The sinuses healed and patient remained well for the next 6 years, except for an occasional drop or two of serous exudate from the suprapubic sinus. In September, 1933, a tuberculous prostatic abscess was found, and the patient was sent to the Lakeville State Sanatorium for further treatment. On admission he showed a scar over the pubis, with a sinus draining purulent material and apparently connected with the bladder. Material from this sinus was found positive for tubercle bacilli on guinea-pig inoculation. X-ray films of the chest were negative, but those of the pelvis showed complete loss of cartilage in the symphysis pubis, with increased density of the pubic bones and bony fusion of the symphysis (Fig. 3). In addition, the patient had a tuberculous prostate and tuberculous epididymes. The lesion in the symphysis was considered arrested, and he was discharged in November, 1933. A

FIGURE 1. *Case 2.*

Note the destruction of left pubic bone, extending into the upper and lower rami.

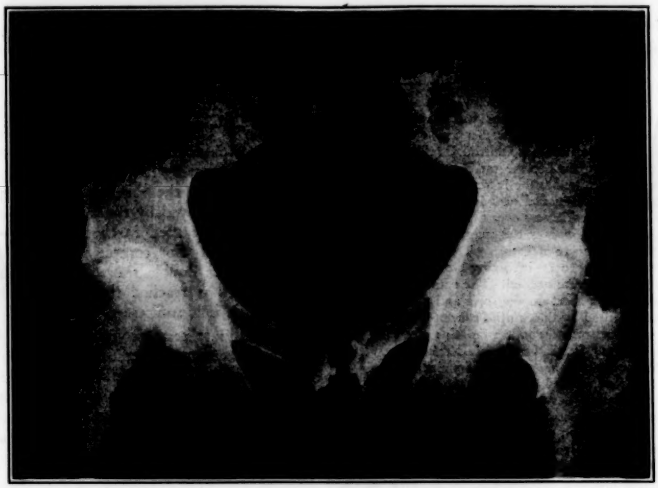

FIGURE 2. *Case 2.*

This film was taken three and a half years after both sacroiliac joints had been fused surgically. Note the increased calcification and new-bone formation bridging across the symphysis pubis.

FIGURE 3. *Case 3.*

The lesion is eight years old. There is a complete loss of cartilage in the symphysis pubis, with increased density of the pubic bone and bony fusion of the symphysis.

recent contact with this patient found him in good health and at work, but still having occasional discharge from the suprapubic sinus.

Case 4. H. M. W., a 15-year-old white girl, had a negative family history. In 1931 she began to experience pain in the region of the left hip. In 1932, while skating, she fell and the pain became worse. She was taken to a local hospital, where x-ray films showed a lesion in the symphysis pubis, and she was hospitalized for 5 months. In October, 1934, this pain became more severe and persistent, and she was admitted to the Lakeville State Sanatorium in November, 1934. Physical examination was essentially negative, except for tenderness over the left pubic bone and a groove-like depression over the symphysis pubis. X-ray films of the chest were negative. Those of the pelvis showed a destructive process involving the symphysis pubis (Fig. 4). Both hips were normal. The patient was treated for 3 months with a short double spica and then had both sacroiliac joints fused by the Smith-Petersen method. The operations were performed about a month apart. She was allowed up in June, 1935, 1 month after her second operation. While up and about she complained of pain in the region of the pelvis, localized in the right sacroiliac region and radiating down the right thigh. This pain persisted, and it was decided to fuse the symphysis pubis directly. This operation was performed in October, 1935. A graft was removed from the left tibia and fitted into a groove, which was made to extend across both pubic crests. The appearance and contour of the crest at the time of operation suggested bone degeneration in that area.

Shortly after operation an abscess developed in the suprapubic wound, which broke down and drained. Three sinuses resulted, and two small sequestrums were removed from one of them. After various kinds of local treatment the abscess gradually became smaller and the sinuses healed. The patient was again allowed up, and was discharged in December, 1936, with all the sinuses dry and the abscess healed; she was free from pain (Fig. 5). She has been followed in the Outpatient Department every 6 months since then, and was last seen in the early part of 1938. She has remained free from pain and walks normally, and the sinuses have remained dry and well healed. Routine x-ray examinations have shown increased calcification, and new bone formation bridging across and connecting both pubic bones.

DISCUSSION

The articulation between the pubic bones is an amphiarthrodial joint, formed between the two oval articular surfaces of the bone. Each of these surfaces is covered by a thin layer of hyaline cartilage. These opposed cartilaginous surfaces are connected by an intermediate lamina of fibrocartilage, which varies in thickness in different subjects. It often contains a cavity in its interior, and it is not lined by synovial membrane.[3] The pubic symphysis can be considered as an accessory joint to the pelvis, the most important mechanical function of the latter being to transmit the weight of the trunk and upper limbs to the lower extremities. The ligaments of the symphysis pubis help in resisting the separation of the iliac bones in all rapid movements. During pregnancy the ligaments are relaxed and therefore capable of more extensive movement. During normal life there may be strain on the symphysis and its ligaments but very little if any motion. When disease affects this area, conditions are altered, and this side of the pelvic ring becomes subject to stress and strain with every twist and turn of the body. The infection destroys the cartilage and proceeds to increase the space between the pubes by destroying the adjoining bone. Figure 4 (Case 4) shows the rami of the pubic bone on both sides destroyed by the diseased process. Fixation should be used in the early stages to protect the lesion. For complete immobilization we have used the double short plaster spica. When the patient has reached the convalescent stage a tight pelvic belt suffices.

The ultimate result sought in any tuberculous joint involvement, where the process has gone on to bone destruction, is regeneration of the diseased bone with good bony ankylosis of the articulating surfaces. This decreases to a minimum the future stress and strain on the infected tissue, and helps to prevent the reactivation of the disease. Simple curettage in the non-tuberculous infected processes very often suffices, but in acid-fast lesions this is insufficient and the additional use of a bone graft is desirable. However, experience has shown that bone grafts applied directly in a tuberculous field have very little chance of success and more often than not slough out and form sequestrums. This is true of grafts used for a tuberculous symphysis pubis. Thus, we note that in Case 1 the laying of a bone graft across the symphysis resulted in abscess formation, which cleared up only after the dead bone graft, which was found floating in pus, was removed. In Case 4, likewise, following the graft operation the patient developed a small suprapubic abscess with a few sinuses and several spicules of bone were removed.

The surgical fusion of the sacroiliac joints, on the other hand, provides a new approach to this problem. One objection to this procedure may be that we are fusing joints that normally have very little range of motion to begin with. Much has been written and said about the amount of motion present in the sacroiliac joint. Sashin,[4] as a result of an exhaustive study, reported in 1930 that motion in the sacroiliac joint was at best only slight. Pressure of the superimposed body weight, sudden turns or shifts or any sudden change in position subjected the joint surfaces to great trauma. As a result of this constant pounding, early degenerative changes set in which eventually led to ankylosis. His study was based on findings on 257 postmortem examinations. Brooke,[5] examining 200 anatomical specimens, of which 95 were male and 105 female, found that 37 per cent

FIGURE 4. *Case 4.*

Note the destructive process involving the symphysis pubis and the left pubic bone. Both sacroiliac joints were fused by the Smith-Petersen method.

FIGURE 5. *Case 4.*

This film was taken two and a half years after that shown in Figure 4. A tibial bone graft was laid over the pubic crest two years and three months previously. Note the increased calcification and new-bone formation bridging across and connecting both pubic bones.

of all male joints were completely immovable and ankylosed. In none of the female specimens was bony ankylosis present. This study also showed that an increase in cases of bony ankylosis corresponded directly to an increase in age.

The fact remains that clinically we are unable to determine whether the sacroiliac joint is ankylosed. That an infected process did develop in the anterior part of the pelvic ring suggests that the ring in these cases could benefit by additional strength, which is provided by fusing the posterior joints. Our results with this procedure have been most gratifying.

The operation was performed on 3 patients and in two stages, one sacroiliac joint being fused at each stage. The operation takes half or three quarters of an hour and is not shocking to the patient. The first patient who underwent this procedure (Case 2) stood it very well. A large suprapubic abscess, which was present before operation, disappeared, and the patient continued symptom free, even though the symphysis pubis was not completely healed according to x-ray films. Curetting the symphysis pubis and laying a graft of bone across would have meant operating in a tuberculous field, which might have resulted in sinus formation.

We used this procedure also on a boy of eighteen who had draining sinuses from a suppurative process in the symphysis pubis, which later proved to be non-tuberculous in origin. After he was discharged he went to work on a bread truck, making house-to-house deliveries. He was seen several years later, still active and working hard. The sinuses had remained dry, and he was symptom-free.

The third patient (Case 4) received, in addition to the fusion of the sacroiliac joints, curettage of the diseased area and the laying of a bone graft across the pubis. It is doubtful whether the graft held, as she developed a draining sinus and spicules of bone were removed. Nevertheless, she eventually became symptom free and has remained so for three years.

It would be premature to recommend this treatment for every tuberculous symphysis pubis, but our results indicate that it should be considered, and should be used in selected cases. It seems to offer better protection against the return of the disease and its symptoms than do other procedures, and allows the patient to carry on a very active life after the disease has become arrested.

SUMMARY

Four cases of tuberculous symphysis pubis are reported.

The commoner signs and symptoms of this disease are described.

A new method of surgical treatment, namely the fusion of both sacroiliac joints, is described, and its results and advantages discussed.

Subsequent to submitting this paper for publication, two more cases of tuberculosis of the symphysis pubis have been admitted to this institution, which suggests that the disease is not so rare as its absence in the literature would indicate.

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CONSERVATIVE OVARIAN SURGERY IN THE HANDLING OF DERMOID CYSTS

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THIS paper reports the case of a woman of thirty-three in whom dermoid cysts of both ovaries were found; that on the right involved the entire ovary, and that on the left only a portion of it. The right ovary was removed in toto; the left ovary was partially resected and repaired. This conservative point in the technic, as near as I can determine, is not followed as often as it should be. I am therefore reporting this case because it illustrates a procedure, as related to dermoid cysts, not described in textbooks and rarely suggested in the gynecological literature.

Many authors have written papers in which they condemn the indiscriminate removal of ovaries. Few of them have stressed the fact that dermoid cysts can be partially resected and need not always be completely removed. It certainly seems justifiable to spend the time that is required to perform this type of operation when two facts are considered. The first is that dermoid cysts are recognized most frequently during the childbearing years.[1] This consideration alone calls for conservatism. Secondly, the development of an artificial menopause in a young woman presents a difficult problem.

Bonney[2] and Bell[3-5] in their writings also make such a plea. The latter,[3] in order to emphasize this point, says: "To me, and to many others, ovarian conservation is a surgical axiom; and I consider the indiscriminate 'clean-sweep' removal of ovaries — as a routine procedure — a surgical sacrilege." However, to my knowledge, this conservative procedure has not been employed in Boston. I have questioned a large number of prominent surgeons and gynecologists many of whom hold teaching positions of professional rank in local medical schools, and only one had ever performed the procedure here described. This individual stated that his case was a very recent one.

For many years it has apparently been the custom in cases of dermoid cysts for surgeons to remove both ovaries completely when bilaterally involved. In many cases this was not done if the patient was in the childbearing stage of life. In such cases the smaller ovary was permitted to remain intact — a procedure dangerous in itself. If, however, the surgeon feared the consequences of leaving such an ovary, whether or not the patient was in the childbearing stage, both ovaries were removed. This produced an artificial menopause with its varying signs and symptoms, and often converted a relatively well patient into one who suffered more from the symptoms of menopause than she had ever suffered from the dermoid cyst. It therefore seemed to me advisable to preserve whatever normal ovarian tissue might be encountered in a case of this sort. This opinion was concurred in by a pathologist with whom the technic was discussed some time after the operation. He thought that if normal tissue could be demonstrated there would be no reason for removing it.

I realize that only scanty conclusions can be drawn from one case, but in spite of this I believe I am justified in making this report and the accompanying suggestions, since few references to the conservation of ovarian tissues in these cases are found in the literature. In addition, the case in question is reported because in the seven months which have passed since the operation the patient has had regular menstrual periods and has had no symptoms referable to the menopause. This at least indicates the normal functioning of the portion of ovary that was left in and reconstructed at the time of operation, and therefore seems to justify conservative surgery.

CASE REPORT

L. A. W., a 33-year-old, unmarried woman, had always been in good health except for some of the contagious illnesses of childhood. She presented herself for a routine physical examination because friends had suggested it. Her menstrual periods had begun when she was 12 years old, and occurred regularly every 28 days, lasting only 2 days. On occasion her periods were accompanied by slight pain. The amount of flow was moderate, requiring the use of not more than four or five napkins a day. The last period had occurred on June 22, 1938.

The physical examination was essentially negative. Vaginal examination could not be performed because of a virginal introitus. Rectal examination, however, disclosed the uterus to be normal in size and position. The left ovary seemed slightly enlarged and tender. The right ovary seemed to be about the size of a closed fist, almost filling the right vault; it was not movable, was quite tender and felt tense. A diagnosis of bilateral dermoid cysts was made.

The patient was admitted to the Cambridge Hospital and was operated on July 6, 1938. Exploration of the abdominal cavity disclosed the appendix to be in a retrocecal position, bound down by numerous adhesions and enveloped by a large amount of fat. Only the tip was visible. The uterus was normal in size and position. The right ovary was about the size of a fist. Its capsule was extremely thick, and the ovary lay deep in the pelvis, filling the right vault and posterior cul-de-sac. Numerous hard masses were present near the mid-portion of the right tube. None

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were larger than about half the size of a pea. The left ovary was freely movable and about twice the normal size. About two thirds of it was made up of a single cyst, the capsule of which was extremely thick. There was present, projecting through the wall of the capsule on the upper surface of the ovary, a hard mass. The remaining portion of this ovary appeared normal. The right tube and ovary were removed, and the capsule over the hard structure on the surface of the left ovary was incised. The mass was removed and was found to be a tooth. Cheese-like material oozed through the incision, which was clamped in order to prevent further escape. An incision was made through the normal portion of the ovary just below the level of the capsule, and the cyst was completely removed. The raw surface of the remaining portion of the ovary appeared to be normal, and the surfaces were approximated by means of a continuous figure-of-eight stitch. Reconstruction of this portion of the ovary was accomplished, leaving an organ which was about 3 cm. long, 1 cm. wide and 1 cm. deep. Appendectomy was performed, and the abdomen was closed in layers.

The postoperative course was uneventful, and the patient was discharged on the 14th postoperative day. The pathological examination disclosed the right ovary to be replaced by a cystic cavity, filled with greasy, yellowish material and a moderate amount of hair, and the small cyst of the left ovary to be filled with greasy material and two small cysts filled with clear fluid, accompanied by a small tooth. The final pathological diagnosis of all the tissues removed read as follows: "Bilateral dermoid cysts of the ovaries; healed salpingitis; healed appendicitis; no evidence of malignancy."

Follow-up examinations were made on July 28, August 26 and November 25, 1938, and January 20, 1939. Rectal examination on each of these dates disclosed the uterus to be normal in size and position, and the left ovary to be about the same in size as it was after repair at the time of the operation. In addition, great importance is attached to the fact that since the operation the menstrual periods have occurred with regularity (every 28 days), have not been painful and have lasted as long as they did prior to the operation.

CONCLUSIONS

As previously stated, conclusions should not be drawn from the results of one case. Yet, because this patient has had normal menstrual periods without menopausal symptoms since operation, and because this technic is rarely described in the literature, it becomes apparent that a paper of this type may have value for several reasons. It may encourage the employment of this procedure and also impel others to describe their results in the various medical journals. The hope is held out that a possible guide for surgical conduct may develop by the accumulation of such papers, so that one may give an accurate prognosis, based on results obtained in many cases of this type.

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REPORT ON MEDICAL PROGRESS

DERMATOLOGY

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THIS brief consideration of present trends in the field of dermatology is in no sense intended to be comprehensive. Instead, several important subjects have been selected and these have been dealt with from a practical viewpoint.

SULFANILAMIDE

The steadily increasing use of sulfanilamide in the treatment of diseases of the skin is to be expected from the widespread use of the drug in other conditions. In England and in this country, cases of actinomycosis have been reported to recover following the use of sulfanilamide, after standard forms of treatment had failed.[1] It seems unlikely that all cases of actinomycosis will respond to sulfanilamide as well. Nevertheless, in dealing with so virulent a disease, any suggestion regarding treatment is always welcome and further trial of the drug seems justifiable. Erysipelas, lymphogranuloma inguinale and chancroid seem to respond well to this useful chemical.[2-4] Cases of pemphigus have also been reported to respond favorably.[5]

In a recent address before the New England Dermatological Society, Abramowitz[6] reported remarkable results in the treatment of the highly fatal disseminating type of lupus erythematosus by small doses of sulfanilamide (5 to 20 gr. daily by mouth). With similar doses he obtained excellent results in the management of bullous types

of erythema multiforme. These results seem incredible, and will require confirmation. However, both diseases may be so troublesome that it is well worth while to know of this treatment, even if it should be effective in only a small percentage of cases.

These advances in the handling of several recalcitrant skin diseases may be viewed with enthusiasm, but sulfanilamide must be used with great caution. There is a steadily mounting literature[7] concerning its unpleasant and dangerous side effects. Among the various complications are the following: agranulocytosis (sometimes fatal), acute hemolytic anemia, jaundice, fever, purpura, scarlatiniform and morbilliform eruptions, erythema, urticarial tendencies and exfoliative dermatitis. The development of such complications calls for immediate withdrawal of the drug.

Of special interest is the action of sulfanilamide in producing sensitization of the skin to the action of natural sunshine or ultraviolet light. During the administration of the drug and for ten days or more following its discontinuation, a dermatitis may develop in areas exposed to either form of ultraviolet light. The implications of this fact are obvious. No person under sulfanilamide therapy should be so exposed.

Psoriasis

The mystery of psoriasis remains unsolved, but recent investigations have produced evidence which challenges verification and two outstanding new lines of therapy have been described.

As one reviews the old and the new literature on the treatment of psoriasis, impressive descriptions of dozens of fantastically successful "cures" may be found. There, one may find the case histories of hundreds of psoriatic patients who, though suffering from severe and widespread involvement for many years, have cleared up under one or another new form of therapy. The typical patient resists all forms of treatment until finally he submits to the "Asiatic pill," whole pancreas, injection of psoriatic scales, cortical hormone, liver, gold, deep x-ray therapy to the spine, colloidal sulfur, colloidal manganese or some one of many apparently unrelated types of therapy.

It is important to recall that these brilliant results are reported by authors of unquestioned integrity and ability. Their authenticity cannot be questioned. The case histories are convincing because so many of the patients have resisted all therapeutic approaches and have remained unimproved for years, but have cleared up dramatically in response to one of many diverse treatments. Perhaps psoriasis is a disease of multiple etiology and is amenable only to multiple types of treatment. It does seem true that one often finds the answer to stubborn cases of psoriasis only after a persistent search, by a trial-and-error method, among the many available methods of treatment.

At the present time, in facing the problem of treating this disease, the practitioner should be well acquainted with the technic of administering several of the best accepted forms of treatment. He should bear in mind the efficacy of 3 to 6 per cent crude coal tar, 0.1 to 0.25 per cent anthralin, 2 to 6 per cent chrysarobin and 5 to 20 per cent ammoniated mercury ointments. These agents are still among the best. Ultraviolet light is good therapy and may be given in the office, or the patient may purchase a lamp and receive more frequent self-administered exposures at home, after adequate instructions.

X-ray is useful to a limited extent, but should scarcely ever be employed to the exclusion of other methods. For the treatment of the patient having only a solitary patch of psoriasis, x-ray seems to be particularly effective and lasting in its action. In the average case with more widespread involvement, psoriasis clears up almost uniformly with x-ray, but recurrence is the rule, and it should therefore be used only in carefully selected cases and with great conservatism. Psoriasis is a chronic, recurrent disease, and the use of x-ray always introduces the hazard that the patient may receive an excessive and unsafe total dosage. Remembering the beneficial effects of the first course of x-ray, he is apt to seek further treatment, and may go to a succession of doctors until he gets it. It seems likely that colloidal manganese will stand the test of time and rate a substantial place in the general therapeutic armamentarium, at least until a true specific is found.

In the very long list of therapeutic methods, two outstanding new agents have been mentioned: sarsaparilla and vitamin D. In my experience, both of these methods are well worth trying, but sarsaparilla has seemed to give results far less uniform than those represented in published reports, and vitamin D is known to be effective in only 50 to 70 per cent of cases. In 6 successive cases I studied the effects of sarsaparilla consumed faithfully in large doses for several months. Convincing results were not obtained, but in a seventh case a therapeutic miracle was witnessed, and surprisingly good results have been seen in several patients treated by sarsaparilla combined with other remedies. The sarsaparilla treatment of psoriasis grew out of studies concerning fat metabolism of this disease. The total blood fat, cholesterol and blood phosphatids are all about 40 per cent elevated in psoriasis, according to studies by Bürger and Unna.

Very favorable results in the treatment of cases

of psoriasis were obtained by a low-fat diet, but this form of treatment had to be continued over a period of many months and to most patients proved very burdensome. Therefore, search was made for some therapeutic agent which might be useful in lowering the blood fat without its being necessary to resort to a low-fat diet. An old remedy was resuscitated, namely the sarsaparilla root, which contains saponin as its chief active principle, and since saponin possesses the power of combining with cholesterol, it seemed a logical remedy.

The sarsaparilla treatment consists of the administration of ten to forty-five tablets (Sarsaparill-Tabletten Bürger)* daily for from three to five months or more. Slight to marked restriction of the fat content of the diet is usually recommended, but local treatment is omitted. After all evidences of psoriasis have completely cleared, a small maintenance dose of sarsaparilla is recommended in some instances, but in other cases, all treatment is stopped and recurrence does not take place.

Impressive results have been reported in patients treated by this method. Severe cases of psoriasis of from five to eighteen years' duration have recovered remarkably following this treatment, according to the work of Deneke.[8] Excellent results comparable to those reported by Deneke were reported in the summer of 1938 by Zaun,[9] who studied and treated 20 cases by the same method. He administered five to thirty tablets of sarsaparilla daily with large amounts of fluid, a low-fat diet and a simple salicylic acid ointment applied locally. Satisfactory results were obtained in all the cases except in a few in which the patients did not follow treatment regularly.

The use of vitamin D in the treatment of psoriasis seems logical because of the known response of many cases to natural sunshine and to artificial ultraviolet radiation. However, the doses of vitamin D found to be useful in psoriasis are so extremely large that the method cannot be recommended without a note of warning. Vitamin D is the only vitamin known to be capable of doing harm. In rabbits it causes calcification of the arteries, and there is evidence that similar changes may take place in the human arterial system under the same circumstances.

The effects of massive doses of crystalline vitamin D on 15 men with extensive psoriasis were described by Ceder and Zon.[10] In 11 cases the cutaneous lesions cleared in twelve weeks and no unfavorable reaction was noted following administration of average daily doses of 300,000 U.S.P. units of vitamin D. In an effort to confirm these results, Brunsting[11] studied 19 cases of psoriasis. Except for 3 of these the condition was of long duration, resistant to treatment and subject to frequent recurrences. Brunsting employed vitamin D in the form of Ertron, and used 300,000 U.S.P. units daily. The only local application was petrolatum. Treatment was carried out during the fall and winter months, when psoriasis is less subject to spontaneous involution. Vitamin D in these doses was apparently well tolerated. In fact, in most cases during the early weeks of treatment there was an added sense of well-being. In 2 there was slight elevation of blood calcium associated with nausea and headache, but these symptoms disappeared after treatment was discontinued for a week or two. Of these 19 cases so treated, excellent results were obtained in 10. Three cleared completely, and 7 were markedly improved in from two to seven months.

In evaluating this method of treatment it must be borne in mind that definite danger is involved in the administration of vitamin D in large doses to human beings over a long period of time. Among children especially, the procedure should be used with the utmost caution.

*Manufactured as "Sarsapor" by Johannes Bürger, Ysat Fabik, Wernigerode.

Acne Vulgaris

The emotional and social development of young people of either sex may be affected materially by the embarrassing if not disfiguring effects of conspicuous degrees of acne. Too often the parents of these youngsters are advised to do nothing and are urged to allow their children merely to outgrow the disturbance. Acne may not disappear spontaneously until the age of twenty-six years or later. Even without resorting to expensive dermatological care with x-ray and frequent office visits, much can be accomplished in moderating the effects of acne by means of simple home procedures including facial and scalp hygiene, dietary measures, local applications to the scalp and face, regulation of the bowels, proper use of soap and water, and so forth.

A suitable facial lotion which may be applied once or twice daily is the following:

℞		
	Phenol	3.00
	Camphor	2.40
	Sulfur (precipitated)	2.00
	Calamine	4.00 to 10.00
	Zinc oxide	4.00 to 10.00
	Alcohol (95%)	30.00
	Glycerin	8.00
	Water	q. s. ad. 240.00

If this should prove to be too drying, it may be diluted with equal parts of water.

To the scalp, the following ointment (Foerster's scalp ointment) may be applied one or more times weekly, with shampoos one or more times weekly:

℞	Salicylic acid	2.00
	Sulfur (precipitated)	2.00
	Solution of coal tar (N. F.)	8.00
	Aquaphor (Duke)	
	Lanolin ..... āā ad.	60.00

The following lotion (Markley's scalp lotion) may be applied daily:

℞	Salicylic acid	4.00
	Solution of coal tar (N.F.)	4.00
	Camphor water (U.S.P.)	30.00
	Alcohol (75%) ..... q. s. ad.	180.00

General medical studies are in order, and search should be made for foci of infection, intestinal disorders and lowering of the basal metabolism. The presence of acne, however, is by no means a necessary indication that there is anything wrong with the general health. It is my experience that many patients with typical acne are vigorous, healthy, athletically inclined young people, who on expert medical examination prove to be quite normal in all respects so far as can be determined. Some of them seem to be not only healthy but exuberantly so. If some glandular abnormality must be presumed to be a factor, one cannot avoid the assumption that in these vigorous young people there may be some glandular overfunction rather than underfunction. It is well recognized that severe acne may be associated with adrenocortical tumors. The mechanism of acneform eruption in this group of cases has never been explained adequately, but the cause may well be an oversecretion of the cortical hormone or a secondary hypersecretion of the male sex hormone, for prolonged administration of the cortical hormone to male rats produces hypertrophy of the sexual apparatus. Since acne occurs in 60 per cent of adolescent women and 70 per cent of adolescent men (Bloch), it may be argued that whatever the glandular factor may be, it must be a part of normal adolescence.

X-ray therapy remains one of the most effective weapons in the treatment of acne, particularly if employed in conjunction with good general dermatological care. Results from x-ray therapy are, however, far short of 100 per cent, though some claim it will cure 80 per cent of cases. It must be borne in mind, furthermore, that x-ray therapy cannot be used in early adolescence and in blond, sensitive skins, except in small doses and with great caution. Search is being made constantly for other methods of combating this stubborn disease and particular attention has been focussed recently on glandular therapy.

Endocrine preparations including the male and female sex hormones (testosterone propionate, amniotin, and so forth) and the gonadotropic substances of pregnancy urine (Antuitrin S), have all been tried with disappointing results. This feeling of disappointment concerning the endocrine therapy of acne has been expressed by authorities such as Wise and Sulzberger,[12] Williams and Nomland,[13] Templeton and Truman,[14] Wile et al.[15, 16] and others. For a careful scrutiny of these negative studies, the reader is referred to current reports by these men and to the published discussions of these papers. The favorable results seen in a percentage of the patients were far inferior to those obtained by orthodox dermatological care.

Despite the failure of endocrine therapy, everyone hopes that more light will be shed on this subject and that a successful treatment of this sort will be devised. Wile and his colleagues[15–16] in their studies of the urinary excretion of male and female sex hormones (androgen and estrogen) found that in both sexes the excretion of androgen was increased and that of estrogen was decreased. If hypersecretion of androgen is the important glandular factor in acne, or if hypercortinism or any other form of glandular overfunction is involved, the present endocrinological approach is aimed in quite the wrong direction, because it is devised exclusively on the basis of correcting a supposed glandular underfunction. The matter of balancing glandular deficiency is, as a rule, easier than the problem of dealing with endocrine hyperfunction. This conception might explain the disappointing results currently reported.

Recent evidence tends to show that vitamin D in large doses may be of value in the elimination of the pustular element in acne. The excessive oiliness of the skin and comedo formation remain unchanged, but the more conspicuous element of secondary infection improves.

Highly successful results were reported by Maynard[17] in 76 per cent of 132 cases of acne treated by viosterol in daily doses of 20 to 40 drops.

Daily doses of vitamin D varying between 20,000 and 100,000 U.S.P. units were recommended by Hinrichsen and Ivy,[18] who obtained favorable results in one to five months. They concluded that the action of vitamin D in the therapy of acne was to increase the skin's resistance to infection.

PRURITUS ANI

Pruritus ani is not always a minor ailment, and is capable of producing nervous reactions of serious import. In some cases the grade of itching is comparable in degree to severe pain, and after weeks or months of constant discomfort and great loss of sleep, the picture may be a desperate one.

The commonest forms of pruritus ani are due to fungous infections, seborrheic dermatitis and psoriasis. For practical purposes, all three of these types may be treated by identical methods. The perianal skin changes in this group are too familiar to require description, and consist of varying mixtures of erythema, scaling, maceration, excoriation and fissuring.

The practitioner will meet with far greater success in treating pruritus ani if he remembers that fecal staining is always an exciting factor of importance. Small amounts of fecal material left in the skin folds after defecation and the particles deposited after passing gas are capable alone of causing marked itching. Irritation from fecal material probably not only serves to stir up and aggravate perianal fungous infections but may prepare the soil for the original inoculation. Therefore in treatment rigid cleanliness is essential. Careful instructions should be given to cleanse the area with olive oil and Kleenex following each bowel movement, and also following episodes of passage of gas per rectum during the day. This latter point cannot be stressed too strongly.

Lilienthal[19] has outlined a very successful form of treatment which seems to be based almost entirely upon the simple principle of protecting the anal region against contamination with fecal matter. The affected parts are thoroughly cleansed at the start with any of the noninflammable grease solvents and the area is allowed to dry. The fissures and folds of the area are thoroughly filled with some bland substance such as ordinary zinc oxide ointment. The patient is then instructed to apply a thick coating of zinc ointment before each evacuation. In this way, the fecal material is prevented from coming in contact with the affected area of skin, and after the movement the stains may be easily removed with soft paper. After the inflammatory changes have subsided, a lighter type of ointment may be used as a prophylactic to replace the heavy zinc ointment mixture. A high percentage of success has been reported from the use of this simple and very plausible type of treatment.

The commonest error in treating pruritus ani lies in the use of excessively strong antiseptic applications. Whitfield's ointment and its commercial imitations (Kerolysin) contain 6 per cent salicylic acid and 12 per cent benzoic acid, and are much too corrosive for the sensitive anal region, in the average case. More suitable local remedies include permanganate (1:10,000 dilution) wet dressings; ointments containing 1 to 3 per cent salicylic acid, 1 to 3 per cent sulfur, 3 per cent pine tar ointment (U.S.P.), 5 to 10 per cent ammoniated mercury, 6 per cent crude coal tar or 5 to 10 per cent Supertah; and many others. The use of crude coal tar ointment is a "messy" type of treatment but is one of the best.

To be highly recommended in the treatment of pruritus ani is the following formula (Foerster's groin ointment):

℞	Salicylic acid	2.00
	Sulfur ointment (U.S.P.)	2.00
	Pine tar ointment (U.S.P.)	2.00
	Aquaphor (Duke) q. s. ad.	60.00

This may be applied directly to the affected area, morning and night.

It is well to keep in mind that all fungicidal remedies for pruritus ani are potential allergens, and that their use is complicated frequently by varying degrees of chemical dermatitis, which may serve to aggravate the condition considerably. The patient should be warned of this possibility so that his confidence will be preserved, and alternative forms of treatment substituted if necessary.

X-ray is sometimes an indispensable aid in the therapy of pruritus ani, and ultraviolet light proves to be of value in occasional cases. Neither x-ray nor lamp should, however, be used to the exclusion of anal hygiene and properly selected local applications.

Infantile Eczema

In the management of infantile eczema, Sulzberger[20] has presented a highly practicable and simplified conception along with many clear-cut suggestions regarding treatment. Sulzberger considers that the expert should be able to differentiate eight different forms of eczematoid dermatoses, but he expressed doubt whether the general practitioner will, in the present rudimentary state of knowledge in this field, derive much value in attempting to distinguish between the various forms of eczematoid dermatitis in children below the age of two years. There are several good reasons for this, including the fact that the infantile eczematoid eruptions do not as a rule present the typical distributions which constitute such important aids in the differential diagnosis of the adult form. In addition, the tendencies toward vesiculation and weeping, which are almost pathognomonic of adult contact type of dermatitis, and which are completely absent in the uncomplicated atopic type and seborrheic dermatitis in adults, are likely to be present in all forms of infantile eczema.

Sulzberger considers that, from the purely practical viewpoint, the physician will be more successful if he discards theory and, for the present at least, regards infantile eczema as a cutaneous eruption to be managed as a single disease, and he advises that the dermatological treatment be

determined more by the state of the skin than by the cause of the eruption. In infantile eczema the most promising therapeutic approach is that which is directed against the presenting manifestation, such as the removal of crusts and scales, the combating of infections, the soothing of irritations, the alleviation of itching and the prevention of scratching.

The most practical point of view for both physician and mother is that which regards infantile eczema as a result of maladjustment of the skin to the radical changes of environment which occur when the baby is born. The skin is the most delicate and the most exposed organ, and it is that organ which has to the greatest degree the function of protecting the individual from the outside world and of adapting him to his environment. All the new substances of the outside world including dust, feathers, wool, silk, animal emanations, cleansing agents, soaps, and so forth, begin their onslaught. The various physical forces such as heat, cold, light, moisture, friction and pressure all require cutaneous adjustment. Hordes of living micro-organisms including fungi, bacilli, cocci and viruses begin to settle on the surface of the skin and take up their activities there, and these must be controlled and resisted. In addition to all these external attacks, the skin must learn to cope with the products of digestion which are brought to it in the blood stream, and to adjust itself to substances absorbed by inhalation. Furthermore, the skin must adapt itself to the products emanating from new foci of internal and external infection.

In treatment, therefore, the eczematous baby should be protected so far as possible from the violence of these varied onslaughts. The temperature of the room and of the entire environment should be kept even (about 68°F.). The clothing should be light, soft and cool, and next to the skin smooth cotton or linen should always be used in preference to woolen or other rough material. The baby's skin should be kept clean and soft; and this must be accomplished without the use of soap. If there is one point on which all authors agree, it is this: Except on the scalp, soap is "poison" for most infantile eczemas. Care should be taken to see that no soap remains in the clothing or bed linen; thorough and repeated rinsing of all garments and linen is essential. Instead of soap's being used, the child should be bathed with tepid water to which starch, oatmeal or tar has been added; it is surprising how well one can clean a child by such means.

Eczematous skins are almost always sensitive to friction and to alkalis, and the diapers must therefore always be soft, clean, loose and free from every trace of soap. Rubber pants and the like should be dispensed with. The effects of ammoniacal stool and urine must be prevented, and this is most readily accomplished by rinsing the diapers, after washing, with a mildly acid and antiseptic solution. In most instances it is sufficient to soak the diapers in a saturated solution of boric acid.

If after a reasonable trial any case of infantile eczema proves refractory to topical measures, it is advisable to undertake the elimination, one by one, of such potential common dietary causes as cow's milk, wheat, eggs, citrus fruits, spinach, peas, tomatoes, fish and fish products, named in their approximate order of importance. In regard to diet, the approach to this subject by means of a carefully taken history, the close observation of the effects of elimination and re-exposure to certain foods and the constant awareness that a few foods are notorious offenders will as a rule prove more successful than reliance on results of hundreds of cutaneous tests.

Environmental allergens such as house dust and the substances coming from pillows, mattresses, bedding, rugs, draperies and dyed and colored objects may be of great significance in certain cases of infantile eczema. It is therefore expedient to remove all sources of such dust. No feathers, Kapok mattresses, overstuffed furniture, rugs or draperies should be present. The room should be as bare as a barracks, with washable walls and floors if possible. An iron cot with a sterilized horsehair mattress and plain, painted wooden chairs should constitute the bedroom furniture. If Kapok or feathers cannot be removed, the mattress, pillows or other articles containing these allergens should be covered with a so-called allergen-proof cover.

In the matter of reassuring parents, Sulzberger mentions several points of considerable helpfulness:

1. The baby will almost certainly get over the cutaneous disorder. In most cases, there is spontaneous cure at about the age of two years or before.
2. No marks and no scars will be left by the eruption. The child's skin has every prospect of eventually being as perfect as that of any other child.
3. The cutaneous condition is not contagious.
4. The baby is a healthy one. The general health and the nutrition will not suffer because of the eczema.
5. There is practically no danger whatsoever of "blood-poisoning" in spite of all the scratching.
6. The baby is not really suffering to the extent to which it appears to be. When it gets over this trouble, no general impairment of health will remain, and no memory of the episode will persist.

Statements of this type will often pave the way to cure by reassuring the members of the distressed family so that they become of valuable assistance in the further management of the case.

Vitamins and the Skin

The skin, which carries a storage of vitamins A, C, D and possibly B_2, may reflect the earliest clinical signs of vitamin deficiency, a fact worth bearing in mind in this age of vitamin enthusiasm. For example, the dryness, scaliness and other cutaneous changes characteristic of vitamin A deficiency may appear before the onset of night blindness or xerophthalmia. So much attention has been focussed recently upon the vitamins, in relation to health and diseases, that it is worth while to know what the skin teaches us about this interesting subject. Recent reports concerning vitamins and the skin have come from Youmans and Corlette[21] concerning vitamin A and from Goodman,[22] who has made an extensive review of the literature.

Vitamin A Deficiency

In vitamin A deficiency the skin undergoes quite distinctive alterations. Some cases show a dry, horny condition with peculiar conical papules arising at the sites of the hair follicles and involving particularly the thighs, arms and buttocks. These changes completely disappear following the administration of cod-liver oil or haliver oil. In other cases, an acneform papular eruption involving chest, back, arms and shoulders may dominate the picture. Comedones of the face may appear, but these are more keratotic than in true acne. Pustulation is rare except as a late manifestation. The fingernails and toenails may undergo changes including lack of luster and brittleness. The acneform disturbances and the nail changes may be corrected by vitamin A therapy in the form of either haliver oil or cod-liver oil.

Vitamin B_2(G) Deficiency

The dermatitis of pellagra is brought out by the action of sunlight on the exposed areas of the skin, including face, neck, wrists and backs of hands, in subjects who have subsisted on a prolonged, grossly deficient diet. The areas affected become brightly erythematous and present sharp lines of demarkation. Thickening, desquamation and pigmentation develop later. The symptoms of pellagra are relieved by the administration of brewer's yeast, liver extract or nicotinic acid combined with a liberal and well-balanced diet.

Vitamin C Deficiency

In scurvy, the capillary walls become fragile and hemorrhages occur with ease. Swollen gums, ecchymoses and purpuric and hemorrhagic tendencies become evident. In both vitamin A and vitamin C deficiency follicular hyperkeratosis occurs, and the early follicular lesions in these two conditions are indistinguishable. In more advanced stages, however, the hyperkeratosis of the hair follicles in scurvy may be distinguished by perifollicular hemorrhages. Follicular hyperkeratosis may be the first recognizable sign of the scorbutic tendency, and may permit diagnosis before the onset of other scorbutic symptoms.

All symptoms of scurvy, including the pigmentation seen in occasional cases, may be relieved quite promptly by the administration of orange juice, lemon juice, tomato juice and other rich sources of vitamin C. Cevitamic acid, the crystalline form of this vitamin, may also be used.

Of great interest is the convincing literature which has accumulated in the last few years concerning a relation between vitamin C and hypersensitiveness to arsphenamine.[23] In the treatment of exfoliative dermatitis due to arsenical therapy, vitamin C has been employed with success far surpassing the older methods used in this troublesome ailment. The evidence is that vitamin C should be employed routinely in large dosage as an adjunct in arsphenamine therapy.

Other Vitamins

The relations between vitamins B_1, E and F and the skin are at present so ill defined clinically as to merit no special mention in this summary.

In the treatment of acne, psoriasis and pemphigus, vitamin D seems to be of value if employed in large dosage. There is little clear-cut evidence, however, that deficiency of vitamin D is of importance in the etiology of these diseases.

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CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

ANTEMORTEM AND POSTMORTEM RECORDS AS USED IN WEEKLY CLINICOPATHOLOGICAL EXERCISES

FOUNDED BY RICHARD C. CABOT, M.D.

TRACY B. MALLORY, M.D., *Editor*

CASE 25191

PRESENTATION OF CASE

A sixty-nine-year-old married Italian woman was admitted complaining of swelling of the legs and shortness of breath.

She was born in Italy and had lived there for fifty years in good health. Fifteen years prior to admission, approximately at the time of coming to Boston, she developed a chronic cough which was productive of a small amount of white phlegm. The cough was noticed especially in the morning. It was never blood streaked. She saw numerous physicians without relief. There was no weight loss, weakness, anorexia or fever. At times the coughing attacks lasted until her skin became blue. One and a half years before entry she noticed shortness of breath following activity, and swelling of her legs after standing, for which she was treated with "red capsules." The attacks which resulted in her becoming blue returned at that time. She resumed normal activity after three weeks. During the previous year she had noticed shortness of breath on climbing stairs, and at times her legs became markedly swollen at night, the swelling disappearing in the morning. Six weeks before admission she had had an attack of shortness of breath in the morning to the extent that she could not speak. During the previous four weeks, without evident cold, sore throat or infection, she became progressively bluer. Her legs became swollen and she went to bed, but in bed her abdomen and buttocks became swollen. Her cough persisted. She gained about 30 pounds in weight. During the previous three weeks she had been given two pills of digitalis daily for one week, followed by one pill daily for two weeks. "Brown pills" and Salyrgan injections were also given, which increased her urinary output.

Physical examination showed a large, blackly cyanotic, orthopneic woman in acute distress, with short rapid shallow respirations. The cyanosis involved the face, neck and hands. The superficial veins were markedly distended, especially those of the neck which showed also a deep sustained venous pulse. The heart was enlarged to the left anterior axillary line and 4.5 cm. to the right of the midline. There was a prominent pulsation in the pulmonic area, with systolic and diastolic shock. P_2 was much louder than A_2. There was a faint systolic apical blow, and a faint third sound. The rate was regular at 80. The blood pressure was 136 systolic, 70 diastolic. The lungs were resonant but full of moist rales and rhonchi, especially in the lower lobes. The liver was enlarged to about 10 cm. below the right costal margin. The chest was not barrel-shaped, but was fairly large, consistent with her large build. There was a definite fluid wave in the abdomen, and edema up to the waist. Rectal and pelvic examinations were negative.

The temperature was 99.5°F., rectally, the pulse 70, and the respirations 30.

Examination of the urine was negative except for 8 to 10 white cells per high-power field. The blood showed a red-cell count of 6,610,000 with 110 per cent hemoglobin, and a white-cell count of 7300 with 76 per cent polymorphonuclears. Blood Hinton and Wassermann tests were not done. An electrocardiogram showed low T waves in all four leads. QRS_1 and QRS_2 were slightly slurred, ST_3 sagging. There was right-axis deviation.

After arrival on the ward from the Emergency Ward it was thought that she tried to indicate pain over her heart. Following this her pulse dropped to 56. On the second hospital day her circulation time (arm to medulla, lobelin method) was 30 seconds (normal, 15 seconds). The venous pressure was 270 mm. of water. Digitalis and Salyrgan had no obvious effects. An oxygen tent partly relieved the cyanosis, but she continued rapidly downhill, became unconscious and died three days after admission.

DIFFERENTIAL DIAGNOSIS

DR. DONALD KING: The clinical picture in this case seems clear. In the first place, there is right-sided cardiac failure of extreme degree, with all the signs that go with that condition. In the second place, the right-sided failure is probably due to gross changes in the pulmonary vascular bed. I cannot think of any other lesion which would give the pulsation in the pulmonary area, with the double shock and the very marked or black cyanosis. In the third place, I know of only three conditions which would so obstruct the pulmonary vessels. Of course, we have to think of Ayerza's disease, but this patient was sixty-nine years old and I do not believe that patients with obliterating arteritis, which we mean when we speak of Ayerza's disease, would live to be that old. I do not believe that in this case a syphilitic infection or any other specific etiologic factor is producing obliteration of the arteries. That leaves only extensive thrombosis or multiple emboli, and my

diagnosis will be multiple pulmonary emboli, with probable thrombi and infarcts.

To go a little farther, what possible conditions would be associated with such vascular changes? We should like to find something to explain them. We have no evidence of phlebitis in the peripheral vessels. There is no evidence of anything wrong in the heart, except the cor pulmonale with right-sided failure. There is no indication of coronary thrombosis, valvular disease, hypertensive heart disease, constrictive pericarditis or a congenital heart lesion. There is no fibrillation, and no proof that there are mural thrombi. So far as the lungs go, we have the story of a morning cough for fifteen years. There is nothing in the history or physical examination to warrant the diagnosis of emphysema. A true cor pulmonale is usually associated with emphysema, particularly if chronic bronchial infection is present. We have then no evidence of cardiac or pulmonary lesions, and all we know is that there are marked changes in the pulmonary vessels. You may remember that a year ago Dr. Means discussed a similar case.* To complete the picture I shall assume that the autopsy showed phlebitis, perhaps in the popliteal or pelvic vessels. I shall assume that the heart was negative and that the lungs showed multiple emboli with thrombi and multiple small pulmonary infarcts. I do not know why the record should stress the fact that a Wassermann test was not done; in any case, I shall throw out the possible diagnosis of syphilis.

DR. TRACY B. MALLORY: Does anyone want to disagree or to hazard another diagnosis?

DR. KING: I might say that in this case we have to make the diagnosis of pulmonary emboli and infarcts without a source that can be demonstrated, — without pain, without hemoptysis and without fever, — but we have had such cases. I do not see how we can make any other diagnosis.

I did not see the x-ray film.

DR. MALLORY: You are welcome to it.

DR. KING: I am at a loss to explain the fifteen years' cough, and this x-ray film does not help. I believe that there was some clinical emphysema. Perhaps early stages of cardiac failure would explain the cough. In Dr. Means's case, which I looked up today, the patient had had cough for many years and repeated attacks of bronchitis, so-called, yet the postmortem showed no change in the lungs.

DR. J. H. MEANS: There is another case that Dr. Mallory and I reported years ago. At postmortem there was a thrombosis in the pulmonary artery which completely occluded one main branch. The circulation of the lung had been taken care of by a bronchial artery as big as my little finger. There was marked cyanosis.

DR. KING: As black as in the present case?

DR. MEANS: Not quite.

DR. KING: The cyanosis seems to have been the most marked that we have ever seen in cases of pulmonary emboli.

DR. MEANS: I should like to raise the question, and have Dr. Mallory comment, as to whether there is any extravascular lesion which could impinge on the pulmonary artery in any fashion so as to give cyanosis such as this.

DR. MALLORY: I do not remember ever having seen one.

DR. KING: I tried to bring carcinoma into this picture but could not.

DR. RICHARD SCHATZKI: You may be glad you did not have the advantage of the x-ray interpretation.

DR. KING: I did not insist on it.

DR. SCHATZKI: We do not have any antemortem films. These films were taken after the patient died. The heart appears to be enlarged, but the appearance of the heart in postmortem films is absolutely unreliable, though I think that the heart was enlarged. There are definite changes in the right lower lung field; it is dense. In the lateral view there is additional evidence of a lesion in the right lower lobe and possibly the right middle lobe. This may be collapse.

DR. KING: Could it be infarct?

DR. SCHATZKI: Yes, that is what I was going to say — a large infarct with collapse. It could be pneumonia with collapse. Whatever it is, I think it is something with marked decrease of aeration of this lobe. I do not try to interpret the vascular changes on postmortem films. The appearance of the pulmonary vessel on this film is consistent with pulmonary stasis. That is all one can say. I cannot see any calcified pulmonary vessels.

DR. KING: What about the pulmonary conus?

DR. SCHATZKI: I refuse to make any statement from the postmortem film. There is marked arteriosclerosis of the aorta if that is of any help to you.

DR. KING: You would accept pulmonary infarct?

DR. SCHATZKI: As a possibility?

DR. KING: Yes.

DR. SCHATZKI: This type of pulmonary infarct would not explain the clinical picture, would it? If this is pulmonary infarct it has come within the last few weeks.

DR. CHESTER M. JONES: Would it explain the fifteen years of cough?

*Case records of the Massachusetts General Hospital. (Case 24061.) *New Eng. J. Med.* 218:266-270, 1938.

DR. KING: Has she any evidence of emphysema?

DR. SCHATZKI: No gross emphysema. The films must be taken at the end of inspiration in order to see that.

DR. KING: She has no blebs that you can see?

DR. SCHATZKI: Definitely not, I should say.

DR. MEANS: What do postmortem x-rays show in emphysema? Does the emphysema disappear?

DR. SCHATZKI: I have not seen enough to say.

DR. BENJAMIN CASTLEMAN: The emphysema remains.

DR. SCHATZKI: So emphysema is out, I should say.

CLINICAL DIAGNOSES

Pulmonary endarteritis.
Pulmonary fibrosis.

DR. KING'S DIAGNOSES

Multiple pulmonary emboli with associated thromboses and pulmonary infarcts.
Probable phlebitis in popliteal or pelvic veins.

ANATOMICAL DIAGNOSES

(Ayerza's disease.)
Idiopathic cor pulmonale.
Cardiac cirrhosis of liver.

PATHOLOGICAL DISCUSSION

DR. MALLORY: The postmortem examination is not going to explain this case. We found, of course, a cor pulmonale. The left side of the heart was normal in size, but the heart as a whole was greatly hypertrophied, weighing 500 gm.; that hypertrophy was almost exclusively due to dilatation and hypertrophy of the right ventricle. The latter was about four times as large as normal in volume, and in spite of the extreme dilatation its wall was 5 to 6 mm. in thickness. If a ventricle of that size were contracted, the muscle would certainly measure at least 15 mm., quite as thick as that of the left ventricle. The lungs were normal in size. There was no trace of blebs or emphysema that could be made out in gross. The pulmonary arteries were empty. There were no thrombi or emboli, no areas of infarction. The larger pulmonary arteries appeared definitely dilated and showed numerous bright-yellow atheromatous plaques. As one progressed downward, the atheromatous plaques disappeared, but the dilatation continued as far as we could see the vessels grossly. On microscopic examination the pulmonary arterioles were absolutely normal in size and thickness. The atheromas did not extend down beyond the major branches. There were small areas in the upper lobes where there was a slight amount of emphysema microscopically but not more than most people would consider normal for an individual approaching seventy years of age. Anyone at that age, of course, shows larger alveoli than does an individual of twenty or thirty. So I do not see how we can make a diagnosis of emphysema. The bronchi were not dilated; there was no bronchiectasis, just a minimal chronic inflammatory infiltration. There was a terminal pneumonia.

A PHYSICIAN: No phlebitis elsewhere?

DR. MALLORY: No.

DR. MEANS: Do you think the diameter of the pulmonary circuit was all right?

DR. MALLORY: It was larger than normal.

DR. ALLEN G. BRAILEY: What was the nature of the lesion Dr. Schatzki pointed out?

DR. MALLORY: A terminal pneumonia in the right lower lobe.

A PHYSICIAN: Was there any epithelium in the alveoli of the lungs?

DR. MALLORY: In a normal lung one never sees epithelium in the alveoli, and we did not see any here. We cut many sections. I am sure I looked at slides from fifteen blocks. We also examined a large amount of alveolar tissue which was cut with very thick sections that allow one to look down on the surface of the alveoli and so enable one to estimate quite accurately the vascularity of the alveolar walls. These were as vascular as I have ever seen. Certainly no diminution in the capillary bed could be made out.

A PHYSICIAN: Was there any abnormal thickness of the interstitial supporting tissue?

DR. MALLORY: There was the average amount of interstitial alveolar tissue, nothing more.

DR. A. THORNTON SCOTT: Is it possible it could be explained by pulmonary hypertension?

DR. MALLORY: It seems to be the only possible solution, but I do not know any way of proving that anatomically. I have seen an identical picture in a case that we reported as Ayerza's disease in a twelve-year-old girl. She also had black cyanosis, with a marked cor pulmonale, perfectly normal lungs, atheromas in the major arteries, but no obstructive vascular lesions whatever. This syndrome occurs without any question.

DR. KING: At this age?

DR. MALLORY: No. I should think that that is quite unusual.

DR. MEANS: Could the atheromatous process interfere with the elasticity of the artery sufficiently to cause an embarrassment, hemodynamically speaking, to the flow of blood through the pulmonary circuit?

DR. MALLORY: There is little direct relation be-

tween atheroma and elasticity of arteries. With progressive age the elasticity of the arteries diminishes regardless of atheromatous changes, and one can have severe atheromatosis in younger individuals with well-maintained elasticity. We did not actually test the elasticity of the pulmonary vessels. So far as the microscope can help, there was a normal amount of elastic tissue in the pulmonary arteries. The changes are merely superficial ones in the intima and do not involve the media at all.

DR. HOWARD B. SPRAGUE: Was there any suggestion of trouble in the pulmonary veins?

DR. MALLORY: No; I looked carefully for that because by exclusion it seemed that if there were an anatomical cause it had to be found there.

DR. SIEGFRIED THANNHAUSER: There was no thickening of the heart valves?

DR. MALLORY: None whatever. The tricuspid ring was quite dilated it is true, and I cannot say that there was not some degree of relative insufficiency and regurgitation there.

I neglected to mention that the liver showed an extreme grade of chronic passive congestion, including a definite central sclerosis; this justified a diagnosis of cardiac cirrhosis.

DR. ALBERTO C. TAQUINI: It is natural that interest in Ayerza's disease has remained very lively in South America and particularly in Buenos Aires. Bullrich and Behr[1] in 1925 suggested that the vascular changes seen in Ayerza's disease were probably secondary to pulmonary hypertension. In a series of experimental studies between 1930 and 1932, Ayerza, Solari and Berconsky,[2] Arrillaga, Berconsky and Taquini,[3] and Houssay and Berconsky[4] showed that in Ayerza's disease the oxygen tension in the alveolar air is definitely lower than normal. Their findings closely parallel those of Dautreband, Davies and Meakins[5] in a study of emphysema. They were able to show that cyanosis develops only when the alveolar oxygen tension drops below 80 mm. of mercury. Since the oxygen content of the blood is the same as that of the alveolar air, they believe very strongly that the primary disease is due to a hypoventilation of the alveolar air, that is, to some primary malfunction of the lung parenchyma, not to disease of the circulatory system. They divide the disease into three stages: (1) bronchial — chronic bronchitis of some type which these patients almost invariably have; (2) pulmonary — extension of the disease around the bronchi and spread to the lungs producing fibrosis and emphysema; and (3) circulatory — secondary changes in the arterioles which may intensify the circulatory obstruction developing in the second stage and eventually lead to right-heart failure.

DR. MALLORY: I am sure we are grateful to Dr. Taquini for this information from Ayerza's own clinic. I can only say that in this case I found very little anatomic evidence of chronic bronchitis and certainly no bronchial stenosis. I have no anatomic evidence, therefore, to explain a primary hypoventilation of the alveoli. Conceivably this could develop from faulty breathing habits and it has indeed been claimed that functional polycythemia may appear under such conditions and disappear later when the patient has been re-educated to proper breathing habits. We have, however, no positive evidence to point to any such mechanism here.

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CASE 25192

PRESENTATION OF CASE

First Admission. A fifty-four-year-old married Italian entered complaining of right flank pain and hematuria.

Six weeks before admission the patient had passed some bright-red urine. He had had no pain, but two hours later passed more red urine, immediately following which he was seized with a sudden, severe pain in the right testicle which radiated up through the right groin into the lumbar region where it persisted, causing the patient to double up and roll around. He was relieved by pills prescribed by his physician. Anorexia and nausea were noted, and he vomited once. Following the attack he had urinary frequency and burning. The hematuria persisted for about twenty-four hours, but a residual soreness remained in the right lumbar area for about ten days. One week before entry he passed bloody urine twice, unaccompanied by pain. Four days later he passed some thick, red urine, immediately after which there was a sudden severe pain in the right lumbar region which persisted throughout the night. The hematuria continued until entry. Frequency, dysuria and straining were present and he passed only small amounts of bloody urine, sometimes only a few drops. He had nausea but no vomiting.

Thirty years before admission he had had gonorrhea. Ten years later he was treated for syphilis.

Ten years prior to entry he was treated in an outside hospital for bleeding peptic ulcer.

Physical examination showed a well-developed and nourished man in no distress. Examination of the head and chest was negative. The blood pressure was 152 systolic, 104 diastolic. The abdomen was negative. There was slight costovertebral tenderness on the right. Rectal examination showed tender external hemorrhoids.

The temperature was 101°F., the pulse 100, and the respirations 20.

The urine showed a trace of albumin and contained many white cells and red cells; the specific gravity was 1.020, and culture showed no growth. A phenolsulfonephthalein kidney-function test was normal. The blood showed a red-cell count of 4,700,000 with 85 per cent hemoglobin, and a white-cell count of 6600. The nonprotein nitrogen of the blood serum was 35 mg. per 100 cc., the sugar 101 mg., the calcium 10.46 mg., the phosphorus 3.84 mg. and the uric acid 4.4 mg. A blood Hinton test was negative.

A retrograde pyelogram showed slight diffuse dilatation of the right kidney pelvis, calices and ureter. The ureteral dilatation ended abruptly just below the sacroiliac joint, where there was a rounded filling defect having the appearance of a stone. Three days later another retrograde pyelogram showed slight dilatation of the entire right ureter, but the rounded defect previously described was no longer visible. Cystoscopic examination on the day of admission showed a prominent reddened ureteral orifice on the right, and grossly bloody urine came from the right ureter.

On the fourth hospital day the patient was much improved. He had not complained of any acute symptoms since entry. Only an occasional red cell was seen in the urine. He was discharged on the eighth hospital day.

Second Admission (one month later). Three days after discharge he again had hematuria, with no associated pain. This promptly ceased, but three days later recurred. He then had intermittent hematuria until entry. He had had slight pain in the right costovertebral angle, but no severe paroxysm.

The physical examination showed no change since the previous admission.

On the second hospital day, cystoscopic examination showed slight injection of the trigone. A No. 6 catheter was easily passed to the right kidney, and bloody urine, soon followed by clear urine, was obtained. A culture of this showed *Staphylococcus albus*. He was discharged on the sixth hospital day.

Third Admission (two weeks later). The patient had had no further hematuria but had had an occasional twinge of pain in the right flank. The physical examination was unchanged.

The temperature was 98, the pulse 80, and the respirations 20.

Urine examination showed a slight trace of albumin and 30 red cells per high-power field.

A retrograde pyelogram showed an abnormal upper calyx of the right kidney, characterized by a non-opaque filling defect 1.5 cm. in diameter. This was surrounded by dye. The lower calyx showed a less marked, indefinite deformity. The ureter was normal.

On the third hospital day a retrograde pyelogram following peri-renal air injection on the right side showed the kidney outline very well demonstrated with no deformity. There was a mass in the region of the upper calyx which spread the latter apart. In the lateral film the mass extended downward to the region of the middle calyx and the calyx lay mainly posteriorly.

On the following day another retrograde pyelogram showed the same defect to be present. On the sixth hospital day an intravenous pyelogram with the film taken after blocking the ureter with a Dourmashkin bag showed increased density of the right kidney. There was no variation in the density in the region of the mass previously described. Its degree of opacity was the same as that of the remainder of the kidney. Only a minute amount of dye was visible in the pelvis.

On the ninth hospital day an operation was performed.

Differential Diagnosis

Dr. J. Dellinger Barney: With this story, so far as it goes, one can think of a number of conditions that might cause the symptoms which have been described. He might have had a neoplasm of the bladder, which can give hematuria without any other symptom. He might have had a tumor of the kidney which would explain some of the renal symptoms which he had and also the blood. He might have had a stone in the bladder which might account for the blood but probably not; it is not common with bladder stone to see diffuse hematuria and also there is usually a history of more or less long-continued urinary trouble, frequency, irritability, and so forth. He might have had a renal or ureteral calculus which might produce the bladder symptoms and the hematuria and readily account for the pain, as well as the nausea, vomiting, and so forth. He might have had primary neoplasm of the ureter which would cause obstruction, hematuria and colic and all the other symptoms he had. One should not leave out the possibility of tuberculosis of the kidney, although it does not sound

like a typical history because he had no history of previous bladder disturbance.

I cannot see how the past history would have any definite bearing on the present trouble. The gonorrhea might possibly have resulted in a stricture of the urethra; but I do not believe that the stricture of the urethra in and of itself could cause the situation I have just read or that the bleeding peptic ulcer would influence the situation. We do not know what kind of ulcer it was. It might have been malignant, but that was ten years ago and, if it were malignant, I do not believe he would have been so well as he was when he came in.

"The blood pressure was 152 systolic, 104 diastolic." He was a man of fifty-four and that might be high but perhaps not incompatible with his age. Nowadays one must think of renal hypertension, but I am not aware that it is necessarily accompanied by the symptoms about which we have been reading.

I should like to know what the rectal examination showed besides the hemorrhoids. There might have been something wrong with the prostate. It might have been nodular, irregular and large, or perhaps there was induration at the bladder base, which might help in saying that he had a carcinoma of the prostate or possibly a malignant neoplasm of the bladder.

The white-cell count would go with some urinary infection, probably due to urinary back pressure. He also had evidence of some trouble involving the right kidney. I should say that the disease from which he sought relief had not made much change in the kidney function, at least on one side. It certainly had not lowered the hemoglobin and red count much if at all, and the chemical findings in the blood show that the kidneys were functioning quite well, and I should say that the blood calcium and phosphorus are not indicative of hyperparathyroidism. The x-ray findings and the fact that, on cystoscopy, the right ureter was bulging indicate the possibility of a ureteral stone. However, it might have been a neoplasm, or a blood clot that came down to that point.

We then find that a catheter could be passed all the way up to the kidney without difficulty, a fact which suggests that the object seen in the x-ray film had disappeared. A blood clot, for instance, might easily have gone to pieces and passed down the ureter, or it may have been a stone that was pushed back or went back into the kidney by retrograde peristalsis. It might still have been a neoplasm in the ureter. The fact that he had *Staphylococcus albus* in the urine implies that the first cystoscopy had introduced it, because the urine was previously negative. That is not an uncommon result. It might also be that the stone, if it were a stone, was there and that the ureter was dilated enough so that the catheter passed by without evidence of obstruction — a not uncommon finding.

These filling defects in the kidney pelvis might have been due to a stone or to a neoplasm of the pelvis of the kidney rather than one in cortical substance. These defects might also simply have been due to blood clots from previous hematuria.

The x-ray findings do not rule out, but help to rule out, the possibility of a cortical neoplasm. Such a growth would probably form a mass or a bulge of some sort in the kidney.

"In the lateral film the mass extended downward to the region of the middle calyx, and the calyx lay mainly posterior." That is hard to explain. The lesion might be due to stone or to a pelvic neoplasm such as I have described, or again it might be due to blood clot.

I have mentioned various things, and because I do not like to leave anything out, I should like to mention also the possibility of infarct of the kidney. Such a lesion is rare but is one which might produce some of the symptoms which we have read about. It is obvious that the trouble was in the right kidney, and I shall include also the right ureter. We have first to think of the possibilities of neoplasm, for a neoplasm of the pelvis of the kidney with blood clots would give some of the filling defects that are seen in the ureter and kidney pelvis. We have to think strongly of ureteral neoplasm, but the one case I have had personally and the other few I have heard about produced permanent obstruction to the passage of the catheter up the ureter. While I do not think this lesion can be ruled out I think it is unlikely. I believe we can rule out tuberculosis on the evidence at hand. I think we probably can rule out hemorrhagic nephritis. I cannot really exclude it because I remember one case which we mistook for one of kidney tumor. The patient had hematuria, pain, and so forth, the pain being due to blood clot which was retained in the kidney. So my diagnosis is: (1) pelvic neoplasm with blood clots, (2) renal stone which at one time might have become ureteral, and (3) ureteral neoplasm, probably primary. Either of these three things — stone or neoplasm of the kidney pelvis or ureter — would account for the blood clots which would cause the filling defects that were described.

Dr. Fletcher H. Colby: In discussing this case I ask you, in the first place, to notice that the patient had three admissions to the hospital, so we were in considerable doubt as to the diagnosis, even with the added information that we had from seeing the patient, doing the cystoscopic examinations and personally studying the x-ray films.

Dr. Barney has had the help of none of these things. The x-ray diagnosis suggested the presence of stone in the ureter. One thing that is not in this history is that a waxed-tipped bougie was passed up the right ureter and no scratches obtained. That is a delicate diagnostic procedure, and I think almost never can a stone be present in the ureter and a waxed-tipped catheter be passed by without scratches being obtained. So we were certain that ureteral calculus could be eliminated and that, as Dr. Barney shrewdly observed, it was blood clot in the ureter which had caused the filling defect. The diagnosis was not arrived at until the retrograde pyelograms were done, with perirenal infiltration of air around the kidney.

Dr. Richard C. Batt: I shall not take time to repeat what has already been said in the x-ray report. I shall just point out that the air injection around the kidney shows up very nicely, and here is the deformity in the pelvis, which is also very apparent. The urologists have studied these types of lesions much more thoroughly than I have.

Dr. Colby: Dr. Oliver Cope and Dr. Howard I. Suby visualized the outline of the renal parenchyma very well, and there was no irregularity in outline of the upper pole of the kidney to suggest solid growth of the kidney itself. However, when the film was examined carefully it was easy to see a deformity of the upper calyx which was apparently due to compression and which we considered to be caused by a solid tumor of the upper pole of the kidney. I think it is only fair for Dr. Barney to have a good look at the x-ray films.

Dr. George G. Smith: May I make one remark? We really made the preoperative diagnosis very accurately in this case. In many of the pyelograms the lower half of the pelvis was obliterated, and yet with a good filling on retrograde pyelogram, the calices in the lower half were intact. So we argued from that that there was an extension of growth down half the cortex of the kidney which must be pressing on the cavities of the kidney and which was held away from them by the retrograde injection. When the air injection was done we made a diagnosis of solid tumor involving the upper pole but also extending down through the cortex of the kidney.

Clinical Diagnosis

Tumor of right kidney.

Dr. Barney's Diagnosis

(1) Tumor of pelvis of kidney.
(2) Renal calculus.
(3) Ureteral neoplasm.

Anatomical Diagnosis

Renal-cell adenocarcinoma.

Pathological Discussion

Dr. Tracy B. Mallory: The urological surgeons have of course the most elaborate and most accurate set of instruments and diagnostic measures for examining their patients of any specialists in medicine. The result is that their diagnoses are generally so accurate before operation that cases are seldom of much interest to discuss at clinics of this sort. It is the exceptional case where there is really a great deal of doubt at the time they decide to operate on their patient.

This man was operated on and at exploration it was possible to feel the definite tumor in the upper part of the kidney. The kidney was resected without difficulty. On section in the laboratory the clinical prognostications were completely fulfilled. There was a spherical mass in the upper pole from which extended a tonguelike projection downward through the cortical substance, two thirds of the way to the lower pole. At one point the upper calyx was invaded; this provided a source for the hemorrhage.

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SYMPOSIUM ON VIRUS AND RICKETTSIAL DISEASES

Students of infectious disease are living, at the present time, in an era which is comparable in rapidity of discovery and intellectual adventure to that which transformed medicine in the period between Pasteur and Ehrlich. Ultramicroscopic virus agents have of course been known for a very long time — indeed, ever since the observation of tobacco mosaic in 1892 and the discovery of an invisible agent as the cause of foot and mouth disease in 1897. There was in the ensuing years a natural tendency among investigators to assume the possibility of filterable agents in almost all diseases which were obviously infections, but in which bacterial causation could not be determined. It was not until 1920 that the subject began to develop precision; but in the subsequent nineteen years not only have innumerable diseases of animals and man been conclusively linked with virus causation, but special technics have been devised for virus study by which determination of size and chemical constitution was made possible. Methods of tissue culture have enabled investigators to study individual virus agents in the laboratory, their relations to tissue cells and to cell metabolism, and, to some extent, the immunological reactions they arouse in infected animals. The field has expanded in such a way that it now holds a place as important in medicine as bacteriology itself; and since many of the conditions now known to be caused by these ultramicroscopic agents are among the most important known epidemic diseases, there has developed, at the same time, a special epidemiology to which methods of virus investigation are applicable — not least important among them the problem of the curious preparatory relation of some virus infections to secondary bacterial invasion, as in measles and influenza.

Nothing could be more timely for men in the professions of medicine and of public health than a thorough review of the virus and rickettsial diseases, such as will be held under the auspices of the Harvard School of Public Health during the week of June 12 to 17. Within the past year New England has been confronted with a new experience in virus disease — the human cases of equine encephalitis — and with a rickettsial disease, — Rocky Mountain spotted fever, — familiar in the West but previously unknown in this region.

The problem of keeping abreast of the rapid developments in the epidemiology, the immunology and the treatment of this whole group of diseases is beyond the power of practicing physicians without the assistance of such opportunities for review as these meetings will provide. Undoubtedly to many the Symposium will be very welcome. Details as to the program and registration will be found elsewhere in this issue of the *Journal*.

CITY HOSPITAL TROUBLE

The editorial with the above title, which appeared in the May 4 issue of *The Boston Herald*,

so ably expresses appreciation of the services that Joseph P. Manning and Dr. George G. Sears, as trustees of the Boston City Hospital, have rendered for many years to the people of Boston, so strongly calls the attention of Mayor Tobin to his responsibility in appointing new trustees who are equally well qualified, and so fairly condemns the City Council for its frequent, and usually uncalled-for, attacks on the hospital administration, that it is herewith reprinted in full.

Mayor Tobin will be fortunate if he can find two men as well qualified as Joseph P. Manning and Dr. George G. Sears to act as trustees of the Boston City Hospital. The former had served for more than a quarter of a century and Dr. Sears for twenty-one years. They were as conscientious in their attention to the affairs of the institution as if they received a large salary, instead of no recompense at all, for attendance at the weekly sessions of the board. They had become thoroughly familiar, of course, with the problems of administration. In spite of political pressure, to which they were compelled to give way at times, they made no compromises which impaired the technical excellence of the hospital. Mr. Manning brought to the discussions of the board the experience which he had gained as a highly successful man-of-affairs. Dr. Sears contributed professional judgment of a high quality.

The periodic attacks on the City Hospital have made the lot of the trustees uncomfortable. Trivial defects which could be corrected at once if called quietly to the attention of the board have been ballyhooed out of all proportion to their importance by councilors who wished to gain a few votes. Criticisms based on misunderstanding have been frequent. The good sense and competence of the trustees have been questioned without justification. This irritating sniping, which has been going on so long, was perhaps one of the causes of the resignations.

No board of public trustees, paid or unpaid, can reasonably expect to remain immune from rigorous examination and some harsh criticism. It is the duty of the councilors, the finance commission, the mayor, the budget commissioner and others to exercise authority over such groups. It is quite wholesome that they should be required to give accounts of their stewardship. But, in the case of the City Hospital, the hostility at City Hall has gone to indefensible extremes. If it continues there will inevitably be deterioration in the quality of the trustees, and that will be reflected quickly by a deplorable decline in the efficiency of the hospital itself.

Members of the council can prevent a development of this kind by withholding their fire until they are sure they are correct, and then by refraining from making political capital out of a little mistake in hospital administration.

MASSACHUSETTS MEDICAL SOCIETY

SECTION OF OBSTETRICS AND GYNECOLOGY*

RAYMOND S. TITUS, M.D., *Secretary*
330 Dartmouth Street
Boston

BLEEDING IN THE PUERPERIUM

Mrs. T. H., a gravida II, at term, entered the hospital December 8, 1930, in active labor.

The family history was nonessential. Her past history was negative except for attacks of tonsillitis. The patient's first pregnancy was normal and was terminated by mid-forceps. Catamenia began at twelve, were regular with a twenty-eight-day cycle and lasted four days. Her last period was March 3, making her due for delivery December 10. The present pregnancy had been normal throughout.

Examination after admission showed that the membranes had ruptured; the vertex was presenting in the OLA position. Labor was very rapid and in three hours the baby, weighing 8 lb., 11 oz., was delivered normally. Shortly after delivery bleeding began and the placenta was expressed. The patient was given ergot and posterior pituitary extract and the head of the delivery table was lowered, as her pulse was 160 and of poor quality. She was returned to her room in an hour; the pulse was 136 and of fair quality. An ice bag was applied to the fundus. One hour later, two hours after delivery, her condition was not good, and she became restless and irrational. The pulse was 110. The patient improved slowly but was very weak. She continued to flow bright-red blood, and at 8:00 a. m. on December 21, thirteen days after delivery, she expelled a clot. At 10 a. m. the same day a large clot was expressed; the patient felt weak and her pulse was 120. Another clot was expressed at 10:20 p. m., and she continued to expel small clots until the next morning when another large clot was expressed. At this time the patient's pulse was 160 and very weak.

Blood examination at this time showed a hemoglobin of 45 per cent, a red-blood-cell count of 2,480,000 and a white-blood-cell count of 12,700. A consultant was called, and after her blood had been typed, she was transfused by the direct method with 600 cc. of blood. At the conclusion of the transfusion her pulse had improved and the

*A series of selected case histories by members of the section will be published weekly. Comments and questions by subscribers are solicited and will be discussed by members of the section.

blood pressure was 100 systolic, 80 diastolic. She was prepared for vaginal examination, and a piece of placenta the size of an orange was removed with the fingers. The uterus was washed out with normal saline, followed by alcohol, and packed tightly to the fundus. The pack was removed in twenty-four hours, and she was then given saline and alcohol intrauterine douches. The patient was discharged on the thirtieth postpartum day, with a hemoglobin of 75 per cent, a red-blood-cell count of 4,000,000 and a white-blood-cell count of 7000.

Comment. Procrastination is often intelligent, sometimes fatal. The evidence of the continued bleeding after the birth of this baby should have been recognized as abnormal and the uterus should have been explored much sooner than it was. Severe hemorrhage did not occur until thirteen days after delivery, but before that time there had been much more than a normal amount of flowing every day.

The treatment when the consultant was called is praiseworthy. No attempt was made to enter this uterus until after transfusion had been accomplished. The large piece of placenta was readily found and removed. This uterus was washed with normal saline and alcohol — a common performance in 1930 but one that is seldom employed today — and then packed. It is wise not to leave a pack in the uterus longer than twenty-four hours, and today most people would not follow the removal of the pack with an intrauterine douche. It is also barely possible that had posterior pituitary extract been used intravenously when the first bleeding occurred soon after the birth of the baby, this piece of placenta might have been extruded; however, relatively large pieces of retained placenta are usually somewhat adherent. The aftercare of patients that have bled freely should consist of an anemia diet, large doses of some preparation of ferrous sulfate, and fresh air and sunlight.

DEATHS

AHLSTROM — Hjalmar Ahlstrom, M.D., died in February, 1939. He was in his seventy-seventh year.

Dr. Ahlstrom received his degree from Tufts College Medical School in 1911. He was a member of the American Medical Association and the Massachusetts Medical Society.

KELLOGG — Frederic L. Kellogg, M.D., of 350 Commonwealth Avenue, Boston, died May 2. He was in his seventy-third year.

Dr. Kellogg received his degree from the Bellevue Hospital Medical College, New York City, in 1889. He was a member of the Massachusetts Medical Society and the American Medical Association.

MISCELLANY

NEW ENGLAND MEDICAL CENTER

On Wednesday afternoon, May 10, a reception was given by the Trustees of Tufts College at the Joseph H. Pratt Diagnostic Hospital of the New England Medical Center, as one of the activities of the recently inaugurated Tufts College Medical School Development Program. From two until four the guests were shown the activities of the New England Medical Center, under the guidance of students of Tufts College Medical School. These included visits to the various departments of the Joseph H. Pratt Diagnostic Hospital, the Boston Dispensary and the Boston Floating Hospital.

Tea was served in the library of the Diagnostic Hospital from three until four and was followed by series of short addresses in the auditorium. The speakers were: Mr. Henry Parkman, Jr., chairman of the Tufts College Medical School Developmnt Program; Governor Leverett Saltonstall; Mr. Leonard Carmichael, president of Tufts College, and Mr. Barry Smith, director of the Commonwealth Fund, New York City.

NOTE

The appointment, effective this fall, of Dr. Tracy J. Putnam as professor of neurology and neurosurgery at Columbia University College of Physicians and Surgeons and director of the services of neurology and neurosurgery at the Neurological Institute of the Columbia-Presbyterian Medical Center has been recently announced. Dr. Putnam is at present professor of neurology at Harvard Medical School and director of the Neurological Unit of the Boston City Hospital.

CORRESPONDENCE

EMERGENCY CALL FOR A WOMAN DOCTOR IN INDIA

To the Editor: The Woman's Hospital at Gauhati, Assam, is in urgent need of a woman doctor. Located among the hill tribes in this province of northeastern India, this hospital has a unique opportunity. Until recently it had two American women doctors, but one has left to be married and the other has fallen ill. There are two American nurses on the staff, two Indian women physicians, eight Indian staff nurses and twenty-six nurses in the training school. The hospital has 45 beds and during 1938 cared for 700 in-patients. One hundred and forty operations were done during 1938, and the woman doctor now sought should be able to do surgical work. Laboratory and x-ray equipment is available.

This hospital is under the Woman's American Baptist Foreign Mission Society, which has carried on its work in India for the past century. Applications and inquiries should be addressed to the Christian Medical Council, 156 Fifth Avenue, New York City, or to Miss Hazel F. Shank, 152 Madison Avenue, New York City.

Edward F. Hume, M.D., *Director,*
Christian Medical Council
for Overseas Work.

156 Fifth Avenue,
New York City.

REPORTS OF MEETINGS

WILLIAM HARVEY SOCIETY

At a meeting of the William Harvey Society of Tufts College Medical School on Friday, January 20, in the Beth Israel Hospital auditorium, Dean A. Warren Stearns introduced the speaker of the evening, Dr. Stanley Cobb, whose subject was "Neurosis and Hysteria."

Dr. Cobb introduced his subject by defining its importance and its limitations. General practitioners have stated that one third of their practice is concerned with acute infections, one third with chronic medical and surgical diseases and one third with what they term "functional disease," meaning thereby the neuroses. The word "neurosis" literally means "full of nerves," which obviously signifies nothing to us in this day and age. That the term means there is "nothing the matter" with the patient is untrue; a man with a neurotic symptom who asks for medical help is not to be sent away with a laugh just because physical examination and laboratory studies reveal nothing pathological. Perhaps, in the ultimate analysis, one may say that the neuroses belong in the field of neurology, by reason of the fact that they are outwardly expressed in terms of the neuromuscular system and inwardly in terms of the autonomic nervous system. The latter is often as expressive as the former, and it should be as much a part of the doctor's understanding. The sum total expression of the two systems is classed as "behaviour."

Dr. Cobb's thesis for the evening was a systematic classification of the problems relative to the neuroses. The first or simplest form of neurosis he termed "exaggeration of the normal." This is a well-known phenomenon to all and is a common experience in life. The palpitation, sweating, dryness of mouth, trembling, and so forth, of one who must stand before an audience is called normal. However, in some cases it may be manifestly extreme, such as in the neurotic individual who is seriously disturbed by frequent attacks of syncope. These exaggerations are often conditioned reflexes of special association, and a very common mode of expression is through the autonomic system, especially the gastrointestinal tract and the cardiorespiratory system.

The next type, in increasing degree of complexity, is the "anxiety neurosis," on which Dr. Cobb has directed his special attention the past several years. The term should be applied only to one syndrome — to individuals who are anxious and have symptoms referable to the heart, lungs, chest and neck, taking the form of hyperventilation, rapid heart, a feeling of strangulation and not uncommonly a radiating heart pain indistinguishable from angina. These individuals, however, have perfectly normal hearts, lungs and thyroid glands.

The third form of neurosis is the "phobia," which is a symptom of anxiety but more specifically expressed and localized than the type described above. A special situation is required with specific associations.

Next comes "hysteria" as a special form. The term is often misused; the original meaning was "wandering uterus," in the sense that symptoms were variably referable to whatever organ or structure was the settling place of the "wandering uterus" at the moment. Dr. Cobb believes hysteria should be reserved for a definite syndrome. He presented lantern slides abstracting ideas of several famous psychiatrists. Janet called it "retraction of the field of consciousness" and "dissociation," which is rather too abstract a definition for most of us to fathom. Babinski said it can be produced and relieved by suggestion, which Dr. Cobb does not believe to be quite true. Adolph Meyer defines it as a condition occurring in individuals who are somewhat limited and have something abnormal in their memory fields, and who develop medical or neurological symptoms as a result of their failure in dealing properly with an emotional problem at some early time. Such persons have an actual conversion of the anxiety into an overt symptom.

Dr. Cobb presented a case report of a patient in this category. A nineteen-year-old girl was first seen in a marked state of alkalosis, with hyperpnea and tetany. The maximum respiratory rate was 140 per minute, and the maximum pulse rate 140. At the time that these readings were noted, the pulse beats and respiratory movements were synchronous. She had a basal metabolic rate of +53 per cent, whereas under hypnosis, which relieved her condition, her normal was —11 per cent. The pH of her blood was 7.61; she ventilated 40 liters per minute, the normal mean ventilation being 5 to 7 liters. Dr. Cobb suggested that it is useless to call this either organic or functional disease; it should rather be considered as being both, or a *ratio in equilibrio*.

The patient's history presented several possible early emotional experiences. She was underdeveloped, with respect to appearance, and had a small uterus. Such "baby-doll" types are quite common among women; they know they are attractive and therefore their ideology is concerned with this fact. This is a characteristic of hysteria patients. All have an amnesia of the original cause of their present symptoms. It can be said that average men and women, if they had had similar emotional experiences earlier in life, might have developed similarly. Hysterical symptoms are called by Meyer "pseudoneurological," because they are expressions of either the neuromuscular or autonomic systems, or both. The hyperventilation described in this case was necessarily a mixture of both.

"Exaggeration of the normal," "anxiety neurosis" and "phobia" are forms of neuroses which can be grouped as coming under the autonomic or visceral sphere, and patients with such neuroses usually come to the medical wards. On the other hand, the next three classifications — "compulsion neurosis," "hypochondriasis" and "ruminative tension" — are more truly in the sphere of psychology. Lastly, "dementia praecox" and the "depression psychoses" are true psychoses. This classification illustrates gradations of increasing involvement, increasing divergence from the normal, and an increasingly unfavorable prognosis as one goes down the list.

Dr. Cobb concluded his presentation with the statement that, as in all the sciences, there must be a first or descriptive period; so in psychiatry we are still collecting and describing, and perhaps just beginning to go on to the second period — to work on the problems of the underlying mechanism.

HARVARD MEDICAL SOCIETY

At a meeting of the Harvard Medical Society on Tuesday, January 24, in the amphitheater of the Peter Bent Brigham Hospital, Drs. Merrill C. Sosman and Samuel A. Levine gave a presentation on the subject: "Some Clinicoroentgenological Correlations," using case records and roentgenograms for illustration and confining their remarks to the heart, lungs and esophagus.

Dr. Levine stated that the thesis for the evening was, "To make clearly understandable the limitations of both clinical and roentgenological methods." He said that in some cases the x-ray film is of no material assistance, whereas in other cases diagnosis and even the plan of treatment depend on it, and that the same holds true for physical examination.

The first case illustration concerned a fifty-eight-year-old man, who came in with a history of typical anginal distress, marked on effort, of several months' duration. At discharge, his heart was clinically normal and in good condition; the x-ray findings confirmed this, the heart being normal in size. Two years later he returned with increased symptoms, and the x-ray findings included enlargement of the heart to the left and parallel areas of calcification in the coronary arteries. The patient underwent a total thyroidectomy, following which the heart showed a still further increase in diameter. The appearance was typical of myxedema, and after treatment with thyroid extract, the heart measurements decreased. The patient did very well for the next four years; then his attacks returned, and he died soon after. At autopsy, the calcified coronary artery walls were well demonstrated.

In this case the physical examination and x-ray examination were at first negative; the diagnosis depended on the history. Later, the x-ray films did show calcified coronaries. However, one may have calcification of the coronary arteries without angina pectoris, and vice versa. The x-ray, then, merely offered evidence incriminating the heart, and the case illustrated that angina must be diagnosed from the history and not from x-ray study. It was added that, in recent years at this hospital, thyroidectomy had not been performed because it was concluded that patients so treated became a great burden to themselves and later developed recurrences which were very difficult to treat.

The second case history was that of a sixty-three-year-old man, who complained of "angina." He had pain and a choking sensation in his throat lasting from three to fifteen minutes and radiating down the sternum. However, effort and walking even in the coldest weather caused no pain. Physical examination revealed a heart slightly enlarged to percussion, an aorta large enough to be percussable (both of these findings Dr. Levine had to admit meant little), a Grade I systolic murmur at the base, and a definitely visible pulsation at the base of the neck on the right. His blood pressure was 140 systolic, 80 diastolic. It was fairly certain the patient did not have angina pectoris, but what he did have was the problem.

X-ray examination revealed marked dilatation of the ascending, transverse and descending aorta. It was called "aneurysmal," but pulsations were absent. Dr. Sosman stated that the absence of pulsations does not rule out aneurysm, but that their presence does not necessarily mean aneurysm. The x-ray film also disclosed enlargement of the heart, but in a backward direction such that it was inconceivable that it had been picked up by percussion.

The patient suddenly died five or six years later of rupture of the aneurysm into the pleura; he had never had "angina." Dr. Levine stressed the facts that syphilitic aortitis does not produce pain except by occlusion of the coronaries or by erosion of the bones due to pressure from the aneurysm and that the aortic insufficiency in such patients does not give the pain of angina. Simple evidence for this is that in the South, where aortic insufficiency is so common, patients of this type do not have anginal symptoms. This case illustrates the great importance of x-ray study in the diagnosis of aneurysm of the aorta.

The third case was that of a sixty-six-year-old man, who, for six months, had had dyspnea on exertion, and later even at rest, and cough with the production of sputum. Physical examination revealed: an enlarged heart, distant sounds, premature beats, a Grade II systolic murmur at the apex, a diastolic murmur, gallop rhythm, edema, an enlarged liver, and rales at both lung bases. The blood pressure was 145 systolic, 96 diastolic. The diagnosis was questionable syphilitic aortitis with aortic insufficiency. The x-ray films showed ventricular hypertrophy, and calcification in the aortic valve as seen in the oblique view. The latter, according to Dr. Sosman, is usually a sign of rheumatic heart disease and has not been found in syphilis.

Dr. Levine brought out the fact that in suspected syphilitic heart disease 80 per cent of the patients have a positive Wassermann test. Of the 20 per cent with negative tests, if the x-ray film shows calcification in the valve, then the lesion is of rheumatic etiology. This case illustrates the value of finding calcification of the aortic valve in ruling out the diagnosis of syphilis.

The fourth case was that of a nurse who came in for x-ray study of the chest more in jest than for any indication. The film showed the typical picture of rheumatic mitral disease with slight pulmonary congestion. Dr. Levine had found a clear-cut, but faint, presystolic murmur, and obtained a meager history of chorea. The patient was symptom free for seven more years, then had dyspnea, and so forth, of a fulminating type. X-ray examination this time showed a much larger heart, and increased pulmonary congestion, which is often interpreted as rheumatic pneumonia. She died abruptly within a few months.

X-ray study having been the means of diagnosis in this case, Dr. Sosman cannily asked Dr. Levine if it were possible to have mitral stenosis without a murmur. Dr. Levine countered by saying: "Possibly, but almost never," whereupon Dr. Sosman demonstrated roentgenograms showing a very large left auricle in a case in which Dr. Levine had been unable to find a diastolic murmur. According to Parkinson, of London, x-ray examination revealing a large left auricle is the second most important sign of mitral stenosis. The inferences from these experiences were that auscultation of the heart is the most important method in the diagnosis of mitral stenosis, but that occasionally x-ray study is indispensable.

The fifth case was that of a fifty-three-year-old woman who had a history of palpitation and ascites of two years' duration. Her blood pressure was 160 systolic, 84 diastolic; her heart was slightly enlarged, with regular gallop rhythm, no murmurs, an electrocardiogram showing low voltage in the ventricular complexes, edema and a negative blood Wassermann test. A satisfactory diagnosis could not be made.

X-ray examination revealed marked cardiac enlargement and a dense shell of calcification all around the heart but more pronounced on the right, findings typical of constrictive pericarditis. Dr. Sosman demonstrated kymograms of a similar case to show the improvement as measured by heart-border excursion after operation. In the present case, however, since the patient was comfortable and the progress of the disease very slow, it was thought that the risk of operation was not warranted. It was stated that some cases of calcification do not show constriction.

Dr. Levine prefaced the discussion of congenital hearts by comparing congenital with acquired heart disease in general terms. The cyanosis of the former is the result of right-to-left shunting of the blood, whereas in the latter type it is due to poor aeration in the lungs as well as peripheral dilatation of the venules. In acquired heart disease, clubbed fingers occur only in subacute bacterial endocarditis, but are common in cyanosed patients with congenital heart disease. A loud murmur in a young patient is suggestive of the latter, and the electrocardiogram is of little use in diagnosis except in cases with dextrocardia and a few other rare anomalies. Polycythemia

is a common finding. Congenital hearts are subject to bacterial endocarditis, and have a high incidence of associated tuberculosis, mental deficiency and acquired rheumatic heart disease. Coarctation of the aorta and a patent ductus are relatively easy to diagnose; the tetralogy of Fallot and Rogers's disease and one or two other types are difficult but possible to diagnose.

Dr. Sosman then presented several roentgenograms illustrating these conditions. A right-arched aorta is demonstrated by the deviation of the esophagus; in adults, this may result in dysphagia lusoria. Coarctation could, at one time, be diagnosed only by the x-ray findings of a small aortic knob, moderate cardiac enlargement, notching of the ribs and a large supra-aortic saddle. It can be clinically suspected, now, where hypertension is found in youth. Dr. Levine emphasized how slight the coarctation may be, and how very easily missed. He suggested that one routinely feel of the femoral arteries in cases of hypertension, especially in youth. In coarctation the femoral pulse is very weak or absent. The hazard for these patients lies in heart failure, rupture, bacterial endocarditis or cerebral accident.

The sixth case was that of a sixty-eight-year-old man, who complained of dyspnea, pain in the chest and weakness of several weeks' duration, not related to effort. Physical examination revealed a questionable mid-diastolic murmur, a rumble at the apex, dullness in the right axilla and at the right lung base, scattered bronchial squeaks, and rales not like those in heart failure. The diagnosis was questionable bronchiogenic carcinoma of the lung. The x-ray film showed atelectasis of the right middle lobe. Bronchoscopy established the diagnosis. X-ray therapy alleviated the pain, but the patient died a few months later. Radiation does not alter the course of the disease, but it is of definite value in the relief of pain. This case illustrated the fact that cancer of the lung may simulate heart failure.

The seventh case, that of an eighteen-year-old boy, who had a history of hemoptysis off and on over a period of ten months following an attack of grippe. Physical examination was negative except for a small area of dullness over the right lung base near the spine, which was unfortunately not taken seriously enough. The roentgenologist also missed the diagnosis at first, but on further consideration it was noted that the hilar shadow on the right side was less dense than normal. The entire lower lobe was atelectatic and pressed against the heart shadow. A diagnosis of a benign blocking tumor was made, and on operation a fetal bronchial adenoma was successfully removed.

The eighth case was that of a twenty-three-year-old woman, who had had pleurisy at the right base post partum. Four years later she came in complaining of being tired and listless and having lost 12 pounds. On physical examination it was stated that the lungs were clear and resonant. X-ray examination revealed an extensive pneumonic consolidation of the right base, consistent with an unsensitized type of tuberculosis, and also definite apical tuberculosis that was not picked up on physical examination.

This is one disease in which it matters a great deal whether the diagnosis is made early or late. A negative physical examination is an absolutely useless criterion of the presence or absence of pulmonary tuberculosis. In one series reported from Saranac, 15 per cent of the cases were negative to physical examination on entry, and this in a place where only a few of the entries had early forms of tuberculosis. X-ray study is of prime importance in this field.

At this point Dr. Sosman threw on the screen pictures of the shrine of St. Anne de Beaupré surrounded by crutches, braces, casts, and so forth, mute evidence of cures effected by faith, and then, drawing the analogy, pictured a corner of his x-ray laboratory with stethoscopes piled high in equally mute tribute to their uselessness in diagnosis!

The ninth case was that of a twenty-five-year-old woman, who had a story, of ten months' duration, of an irregular fever of 102 to 103°F., with loss of weight and strength, stomatitis, pain in the flank, pelvis and lower quadrants, and night sweats. She had no cough. On physical examination she was found to have a Grade I apical systolic murmur, a few nodes in the axilla and groin, and tenderness in the right upper and left lower quadrants. Laboratory tests showed a hemoglobin of 57 per cent, a red-cell-count of 4,000,000, and a white-cell-count of 13,000 to 20,000. Various diagnostic possibilities were considered: tuberculosis, focal infection, and pelvic or renal disease.

By x-ray study she was shown to have a very slightly widened supracardiac shadow, which on fluoroscopy suggested a mass of lymph nodes behind the sternum. X-ray therapy resulted in a decrease in the shadow, and the temperature came down almost by crisis. For the three years since that time the patient has been perfectly well. Apparently the lesion was a localized type of Hodgkin's disease, and the alleviation is probably only temporary. It was stated that very few cases of Hodgkin's disease survive for more than five years, but that one case at the hospital had been followed for ten years. The type that promptly responds to radiation recurs just as rapidly. It was said that this case illustrated the use of x-rays as a method of diagnosis by therapeutic result; it was the sole method of diagnosis and treatment.

The tenth case was that of a sixty-one-year-old man, who had had pain in the chest and dyspnea for six months. The pain was described as pressing on the midsternum, usually coming on at night, and lasting several hours. The patient had had no disability on effort. He was admitted with a diagnosis of angina. Physical examination revealed a blood pressure of 128 systolic, 70 diastolic, a normal heart, limited chest expansion, diminished breath sounds, and bronchial squeaks and rales on inspiration and expiration, which were also audible at the front of the chest — findings not consistent with heart failure except in its most terminal stage. There was marked cyanosis. A diagnosis of questionable mediastinal obstruction was made.

Roentgenograms showed moderate enlargement of the mediastinal area, marked pulmonary emphysema and displacement of the trachea, first to the left, then to the right. The diagnosis was a substernal thyroid gland. On fluoroscopy, a typical "thyroid plunge" could be demonstrated when the patient was asked to cough. The trachea was also displaced forward by the retrotracheal extension of the non-toxic gland.

After operation, breathing was relieved, but as is usually the case, there remained chronic bronchitis and emphysema. Although clinically a mediastinal tumor was suspected, x-ray study more precisely established the diagnosis of thoracic goiter.

For their final case history Dr. Levine and Dr. Sosman presented an old case, that of a man who was forty-eight years old in 1920 and first came in for angina pectoris. He had pains in the midsternum which came on usually in the middle of the night and were unaffected by effort. He had been studied by almost every doctor and clinic in the United States and elsewhere at one time or another, with no success so far as the correct diagnosis or

treatment was concerned. Finally a roentgenogram taken during an attack of pain showed constriction of the esophagus, relieved by a drink of hot water. Esophagoscopy at first suggested carcinoma, then a benign adenoma, but finally a diagnosis of aberrant gastric mucosa and ulcer was made. Thereafter his course was not different from that of the average ulcer patient under treatment, and today he is alive and well at sixty-six.

NOTICES

SYMPOSIUM ON THE VIRUS AND RICKETTSIAL DISEASES

The Faculty of the Harvard School of Public Health offers a short course of lectures, clinics, and demonstrations on the virus and rickettsial diseases, with special emphasis on their public-health significance, to be held at the school during the week of June 12–17.

The fee for the course will be $25.00, payable at any time up to June 12. Enrollment, however, should be arranged before June 1, as facilities for many of the clinics and demonstrations are limited. The lectures will be published later in a single volume, which will be sent to each person who has registered for the course.

The Registration Office in the Harvard School of Public Health will be open for registration Saturday and Sunday, June 10 and 11, from 9 until 5 o'clock. Persons attending the symposium are requested to register as promptly as possible after arriving in Boston.

Further information may be had by writing to the Secretary of the School of Public Health, 55 Shattuck Street, Boston.

The complete program follows.

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MORNING SESSIONS

Vanderbilt Hall

MONDAY, JUNE 12

Presiding — Dr. Cecil K. Drinker, dean and professor of physiology, Harvard School of Public Health.

10:00–10:10 Greeting. President James B. Conant.

10:10–10:45 Epidemiologic Problems in Virus Diseases. Dr. John E. Gordon, professor of preventive medicine and epidemiology.

10:45–11:30 Insects as Vectors of Virus Diseases. Lieut. Col. James S. Simmons, Medical Corps, U. S. Army, assistant corps area surgeon, Headquarters First Corps Area, Boston.

11:30–12:15 The Immunology of Infections by Filterable Virus Agents. Dr. Hans Zinsser, Charles Wilder Professor of Bacteriology and Immunology.

12:15–1:00 The Physical and Chemical Properties of Filterable Viruses. Dr. J. Howard Mueller, associate professor of bacteriology and immunology.

TUESDAY, JUNE 13

Presiding — Dr. Edwin H. Place, instructor in communicable diseases, Courses for Graduates, and physician-in-chief of the South Department, Boston City Hospital.

9:00–9:30 The Epidemiology and Control of Variola. Dr. Frederick F. Russell, professor of preventive medicine and epidemiology, emeritus.

9:30–10:00 Methods of Preparation and Use of Smallpox Vaccine Virus. Dr. Elliott S. A. Robinson, assistant professor of applied immunology and director of the Division of Biologic Laboratories, Massachusetts Department of Public Health.

10:00–10:15 Generalized Vaccinia. Dr. Ralph A. Ross, assistant in pediatrics.

10:15–10:30 Neurologic Complications of Vaccination. Dr. R. Cannon Eley, associate in pediatrics and communicable diseases.

10:30–10:45 The Etiology of Measles. Dr. John F. Enders, assistant professor of bacteriology and immunology.

Recess

11:00–11:40 The Prevention and Modification of Measles. Dr. Charles F. McKhann, associate professor of pediatrics and communicable diseases.

11:40–12:10 Administrative Problems in the Control of Measles. Dr. Harold D. Chope, instructor in public-health administration and director of public health, Newton, Massachusetts.

12:10–1:00 Mumps: Its glandular and neurologic manifestations. Dr. Conrad Wesselhoeft, associate in communicable diseases.

WEDNESDAY, JUNE 14

Presiding — Dr. Frederick F. Russell.

9:00–10:00 The Absorption of Toxic and Infectious Material from the Respiratory Tract. Dr. Cecil K. Drinker.

10:00–10:30 General Considerations of Virus Diseases of the Respiratory Tract. Dr. John A. Mote, associate in research, House of the Good Samaritan, Boston.

10:30–11:00 Distemper in Animals. Lieut. Col. Raymond A. Kelser, Veterinary Corps, U. S. Army, chief of Veterinary Division, Office of the Surgeon General, Washington, District of Columbia.

Recess

11:15–12:15 The Human and Swine Influenzas. Dr. John A. Mote.

12:15–12:45 Psittacosis. Dr. John F. Enders.

12:45–1:00 Lymphogranuloma Inguinale. Dr. Nels A. Nelson, lecturer on public-health administration and director, Division of Genitoinfectious Diseases, Massachusetts Department of Public Health.

THURSDAY, JUNE 15

Presiding — Dr. Richard M. Smith, assistant professor of pediatrics and child hygiene.

9:00–9:30 The Epidemiology of Poliomyelitis. Dr. W. Lloyd Aycock, assistant professor of preventive medicine and hygiene.

9:30–9:50 The Clinical Features and Treatment of Poliomyelitis. Dr. Charles F. McKhann.

9:50–10:10 Poliomyelitis: A review of preventive measures. Dr. W. Lloyd Aycock.

10:10–10:45 The Classification of Encephalitis with a Consideration of Certain Epidemic Types. Dr. LeRoy D. Fothergill, Silas Arnold Houghton Assistant Professor of Bacteriology and Immunology.

Recess

11:00–11:30 The Epidemiology and Prophylaxis of Rabies. Lieut. Col. Raymond A. Kelser.

11:30–11:55 Equine Encephalomyelitis in Man. Dr. LeRoy D. Fothergill.

11:55–12:25 Lymphocytic Choriomeningitis. Dr. Kenneth D. Blackfan, Thomas Morgan Rotch Professor of Pediatrics.

12:25–12:40 Louping Ill. Dr. LeRoy D. Fothergill.

12:40–1:00 Dengue Fever. Lieut. Col. James S. Simmons.

FRIDAY, JUNE 16

Presiding — Dr. George C. Shattuck, clinical professor of tropical medicine.

9:00–9:30 The Etiology of Yellow Fever and the Characteristics of the Infectious Agent. Dr. A. Watson Sellards, associate professor of comparative pathology and tropical medicine.

9:30–10:00 The Epidemiology of Yellow Fever. Dr. Frederick F. Russell.

10:00–10:30 The Preparation and Use of Yellow Fever Vaccine. Dr. John E. Gordon.

10:30–11:00 The Rickettsial Diseases: A general survey. Dr. S. Burt Wolbach, Shattuck Professor of Pathological Anatomy.

Recess

11:15–11:45 The Diagnosis and Classification of the Rickettsial Diseases. Dr. Henry Pinkerton, director, Department of Pathology, St. Louis University School of Medicine; formerly, assistant professor of pathology, Harvard University.

11:45–12:15 The Clinical Features of Rickettsial Diseases. Dr. John E. Gordon.

12:15–1:00 Epidemiology and Immunity in the Rickettsial Diseases. Dr. Hans Zinsser.

SATURDAY, JUNE 17

Presiding — Dr. C. Sidney Burwell, dean and research professor of clinical medicine, Harvard Medical School.

PANEL DISCUSSION

9:00–10:00 Encephalitis. Discussion directed by Dr. Kenneth D. Blackfan.

10:00–11:00 Rickettsial Diseases. Discussion directed by Dr. S. Burt Wolbach.

11:00–12:00 Respiratory Diseases. Discussion directed by Dr. George K. Strode, associate director, International Health Division, Rockefeller Foundation, New York City.

AFTERNOON SESSIONS

Harvard Medical School and Hospitals

2:15–3:15 and 3:30–4:30, daily. Demonstration of Absorption from the Nasopharynx. *Bldg. C_1, 2nd floor.* Dr. Cecil K. Drinker, Dr. Joseph M. Yoffey, research fellow in physiology, and Dr. Madeleine F. Warren, associate in physiology.

Demonstration of the Pathologic Lesions of the Virus and Rickettsial Diseases. *Bldg. D_2, 2nd floor.* Dr. Henry Pinkerton, Dr. Robert N. Nye, instructor in bacteriology and immunology, and Dr. G. Kenneth Mallory, instructor in pathology.

Exhibit of Insect Vectors of Virus and Rickettsial Diseases. *Bldg. E_2, 3d floor.* Dr. Ernest E. Tyzzer, George Fabyan Professor of Comparative Pathology and Dr. Joseph C. Bequaert, assistant professor of entomology.

Demonstration of Bartonella and Other Blood Parasites. *Bldg. E_2, 3d floor.* Dr. David Weinman, assistant in comparative pathology and tropical medicine.

Demonstration of Methods of Virus Culture. *Bldg. D_2, 3d floor.* Dr. John F. Enders and Dr. William M. Hammon, instructor in epidemiology.

3:30–4:30 Encephalitis Clinic. *Children's Hospital.* Friday, June 16. If more apply than can be accommodated, there will be an additional clinic on Wednesday, June 14.

Poliomyelitis Clinic. *Children's Hospital.* Thursday, June 15. If more apply than can be accommodated, there will be an additional clinic on Tuesday, June 13.

Exanthemata Clinic. *Haynes Memorial Hospital.* Monday, Tuesday, Wednesday and Thursday, June 12, 13, 14 and 15. Each clinic limited to forty persons. Bus service will be provided. If more apply than can be accommodated, an extra clinic will be held on Friday, June 16.

In order to avoid overcrowding and confusion, admission to demonstrations and to clinics will be by special ticket only. Tickets will be distributed at the time of registration.

The Newton Health Department and the Whittier Street Health Unit, in which the Harvard School of Public Health is interested, will be open for inspection by any of the members of the Symposium who wish to visit them. Arrangement for visits may be made at the Registration Office.

EVENINGS

MONDAY, JUNE 12

8:30 Reception for Members of the Symposium and Their Families. Courtyard and terrace of the Harvard Medical School.

FRIDAY, JUNE 16

8:30 Pops Concert. Symphony Hall, Boston. Tickets for the concert may be purchased at the Registration Office.

ANNOUNCEMENT

AGNES A. NERSESSIAN, M.D., announces the opening of an office at 153 Nahatan Street, Norwood.

CARNEY HOSPITAL

The monthly clinical meeting and luncheon of the Carney Hospital will be held in Andrew Carney Assembly Hall on Monday, May 15, at 11:30 a. m. Dr. J. J. Thornton will speak on "Hormone Therapy in Gynecology." Discussion by Drs. James J. Meehan, E. L. Kickham and L. E. Phaneuf will follow.

Mr. S. J. Barham of the Associated Hospital Service Cor-

poration is going to be present to discuss a very acute problem.

Physicians and medical students are cordially invited to attend.

R. J. Heffernan, M.D., *Secretary.*

BOSTON DOCTORS' SYMPHONY ORCHESTRA

Rehearsals of the newly organized Boston Doctors' Symphony Orchestra, conducted by Nicolas Slonimsky, are held every Thursday evening at 7:30 at Hampton Court Hotel, 1223 Beacon Street, Brookline.

Membership is still open. All physicians, dentists and medical and dental students who are interested should communicate with Dr. Julius Loman, Pelham Hall Hotel, Brookline (BEA 2430).

BOSTON DISPENSARY

A luncheon meeting of the clinical staff of the Boston Dispensary will be held on Friday, May 19, in the auditorium of the Joseph H. Pratt Diagnostic Hospital, at 12 o'clock noon.

The program, under the auspices of the Department of Nerve and Mental Diseases, will begin at 12:30 p. m. Dr. Arthur Berk will speak on "The Newer Methods for the Treatment of Dementia Praecox" and Dr. Herbert I. Harris will talk on "A Diagnostic Problem: Neurodermatomyositis."

All those interested in the subject are cordially invited to attend.

Robert W. Buck, M.D., *President,*
James M. Baty, M.D., *Secretary.*

BOSTON LYING-IN HOSPITAL

The Journal Club will hold its next meeting at the Boston Lying-in Hospital on May 17 at 8:15 p. m.

PROGRAM

Diseases of the Veins. Dr. Edward A. Edwards.
Experience at the Boston Lying-in Hospital in the Care of Veins During Pregnancy and the Puerperium. Dr. Weston Sewall.

Physicians and students are cordially invited to attend.

Duncan E. Reid, M.D., *Secretary.*

HARVARD MEDICAL SOCIETY

The next meeting of the Harvard Medical Society will be held on Tuesday, May 16, in the amphitheater of the Peter Bent Brigham Hospital (Shattuck Street entrance), at 8:15 p. m.

PROGRAM

Presentation of cases.
The Turn of the Century—and After. Dr. David Cheever.

Medical students and physicians are cordially invited to attend.

Robert M. Zollinger, M.D., *Secretary.*

MASSACHUSETTS PSYCHIATRIC SOCIETY

The next meeting of the Massachusetts Psychiatric Society will be held at the Metropolitan State Hospital in Waltham, on Friday evening, May 26, at 8:30. Dr. Emerick Friedman will speak on "Alterations in Communicability, Content of Thought and Affective Response During Irritative Therapy."

W. Franklin Wood, M.D., *Secretary.*

NEW ENGLAND OBSTETRICAL AND AND GYNECOLOGICAL SOCIETY

The spring meeting of the New England Obstetrical and Gynecological Society will be held at the Maine General Hospital on Wednesday, May 24.

Registration, ward rounds and operative clinics will be held from 8:00 to 12:00 noon. Luncheon will be served at the Maine General Hospital at 1:00 p. m., and a meeting of the executive committee will be held at 1:30 p. m.

A Dry Clinic at the Nurses' Training School on Chadwick Street will take place at 2:00 p. m. The program will be as follows:

Congenital Deformity. Dr. Theodore M. Stevens.
Some Interesting Phases of Postpartum Care. Dr. Ralph L. Reynolds.
Endometriosis of the Vagina. Dr. Walter F. W. Hay.
Metastatic Carcinoma of the Ovaries, Three Months Postpartum. Dr. Carl E. Dunham.
"It Has Happened Here." Dr. Adam P. Leighton.

There will be a general meeting of the society and assembly at Lafayette Hotel at 5:00 p. m. Dinner will be served at 6:00. The speaker of the evening will be Dr. Martin Sorensen whose subject will be "The Man from Iceland."

NEW ENGLAND PATHOLOGICAL SOCIETY

The annual meeting of the New England Pathological Society will be held at the Evans Memorial Hospital, 72 East Concord Street, Boston, on Thursday, May 18, at 8:00 p. m. Dr. Ernest W. Goodpasture, professor of pathology, Vanderbilt University School of Medicine, Nashville, Tennessee, will speak on "Virus and Bacterial Infection in the Chick Embryo."

Physicians and medical students are cordially invited to attend.

Granville A. Bennett, M.D., *Secretary.*

SOCIETY MEETINGS AND CONFERENCES

Calendar of Boston District for the Week Beginning Monday, May 15

Monday, May 15

*11:30 a. m. Carney Hospital. Monthly clinical meeting and luncheon.

Tuesday, May 16

*9-10 a. m. Roentgenological Diagnosis and Differential Diagnosis of Bone Tumors. Dr. Richard Schatzki. Joseph H. Pratt Diagnostic Hospital.

*10 a. m. - 12:30 p. m. Tumor clinic. Boston Dispensary.

*8:15 p. m. Harvard Medical Society. Amphitheater of the Peter Bent Brigham Hospital (Shattuck Street entrance).

Wednesday, May 17

*9-10 a. m. Hospital case presentation. Dr. S. J. Thannhauser. Joseph H. Pratt Diagnostic Hospital.

*12 m. Clinicopathological conference. Children's Hospital amphitheater.

*8:15 p. m. Boston Lying-in Hospital. Journal Club meeting.

THURSDAY, MAY 18

*9-10 a. m. Recent Advances in Electrocardiography. Dr. H. Magendantz. Joseph H. Pratt Diagnostic Hospital.

*8 p. m. New England Pathological Society. Evans Memorial Hospital, 72 East Concord Street, Boston.

FRIDAY, MAY 19

*9-10 a. m. Some Clinical Aspects of Heart Disease. Dr. Reginald Fitz. Joseph H. Pratt Diagnostic Hospital.

*10 a. m. - 12:30 p. m. Tumor clinic. Boston Dispensary.

12 m. Urological conference, Massachusetts General Hospital, lower outpatient amphitheater.

*12 m. Boston Dispensary, luncheon meeting of the Clinical Staff. Auditorium of the Joseph H. Pratt Diagnostic Hospital.

SATURDAY, MAY 20

*9-10 a. m. Hospital case presentation. Dr. S. J. Thannhauser. Joseph H. Pratt Diagnostic Hospital.

*10 a. m. - 12 m. Staff rounds of the Peter Bent Brigham Hospital. Conducted by Dr. Henry A. Christian.

*Open to the medical profession.

MAY 12 — National Hospital Day. Page 768, issue of May 4.

MAY 12 and 13 — American Heart Association. Page 542, issue of March 23.

MAY 13-16 — American Board of Obstetrics and Gynecology. Page 457, issue of March 9.

MAY 14-20 — American Physicians' Art Association. Page 404, issue of March 2.

MAY 15 — Carney Hospital, monthly clinical meeting and luncheon. Page 816.

MAY 15-19 — American Medical Association. St. Louis, Missouri.

MAY 16 — Harvard Medical Society. Page 817.

MAY 17 — Boston Lying-in Hospital, Journal Club meeting. Page 817.

MAY 18 — New England Pathological Society. Page 817.

MAY 19 — Boston Dispensary. Luncheon meeting of the Clinical Staff. Page 817.

MAY 22, 23, and 24 — American Association for the Study of Goiter. Page 405, issue of March 2.

MAY 24 — New England Obstetrical and Gynecological Society. Page 817.

MAY 26 — Massachusetts Psychiatric Society. Page 817.

MAY 26 — Massachusetts Italian Medical Society. Page 768, issue of May 4.

JUNE 5, 6, 7, and 8 — American Association of Industrial Physicians and Surgeons. Page 581, issue of March 30.

JUNE 6, 7, and 8 — Massachusetts Medical Society. Worcester.

JUNE 12-17 — Symposium on the Public-Health Significance of the Virus and Rickettsial Diseases. Page 815.

JUNE 26-29 — National Tuberculosis Association. Page 936, issue of December 8.

JUNE 29 — Pentucket Association of Physicians, 8:30 p. m., Hotel Bartlett, 95 Main Street, Haverhill.

SEPTEMBER — Boston Psychoanalytic Institute. Page 450, issue of September 22.

SEPTEMBER 11-15 — American Congress on Obstetrics and Gynecology. Page 938, issue of December 8.

SEPTEMBER 15-28 — Pan-Pacific Surgical Association. Page 863, issue of November 24.

OCTOBER 23 - NOVEMBER 3 — New York Academy of Medicine. Page 581, issue of March 30.

FALL, 1939 — Temperature Symposium. Page 218, issue of February 2.

BOOKS RECEIVED FOR REVIEW

The Student's Handbook of Surgical Operations. Frederick Treves. Sixth edition, revised by Cecil P. G. Wakeley. 563 pp. New York: Paul B. Hoeber, Inc., 1939. $5.00.

Studies from the Rockefeller Institute for Medical Research. Volume 111. 617 pp. New York: The Rockefeller Institute for Medical Research, 1939. $2.00.

American Medicine Mobilizes. James Rorty. 358 pp. New York: W. W. Norton & Co., Inc., 1939. $3.00.

Alcoholics Anonymous: The story of how more than one hundred men have recovered from alcoholism. 400 pp. New York: Works Publishing Co., 1939. $3.50.

The Wisdom of the Body. Walter B. Cannon. 333 pp. New York: W. W. Norton & Co., Inc., 1939. $3.50.

The Physiology of Exercise: A text-book for students of physical education. James H. McCurdy and Leonard A. Larson. Third edition, thoroughly revised. 349 pp. Philadelphia: Lea & Febiger, 1939. $3.75.

Classified and Annotated Bibliography of Sir William Osler's Publications. Edited by Maude E. Abbott. Second edition, revised and indexed. 163 pp. Montreal: The Medical Museum, McGill University, 1939. $2.25.

End-Results in the Treatment of Gastric Cancer: An analytical study and statistical survey of sixty years of surgical treatment. Edward M. Livingston and George T. Pack. 179 pp. New York and London: Paul B. Hoeber, Inc., 1939. $3.00.

BOOK REVIEWS

Diseases of the Nose, Throat and Ear. W. Wallace Morrison. 675 pp. Philadelphia and London: W. B. Saunders Co., 1938. $5.50.

This latest addition to the several new books on diseases of the ear, nose and throat fulfills in many ways the essential requirements of a good textbook. Adequate attention to anatomy and physiology is combined with clear description of pathological findings. The subjects of history taking and physical examination receive satisfying attention, and treatment is comprehensively covered within the limits of a book dealing with otolaryngology as a whole. Operative procedures are intentionally limited with a view of providing information rather more as to what surgery the patient requires than as to how it should be performed.

The text is illustrated with 350 line drawings all from the author's pen. The labor of such personal illustrating is patently colossal and merits greater success than has, in the reviewer's opinion, been achieved. An attempt to show, in a single drawing, too many individual items has resulted in a multiplicity of numbered designations which is confusing. Such a type of illustration necessitates elaborate legends, the searching of which induces fatigue and even discouragement. Admirable features are a special index of symptoms and a most comprehensive and useful formulary for the medical treatment of many common ailments.

There is a prefaced declaration that the book is intended primarily for undergraduate medical students and general practitioners; that such a book is provided, the reviewer cannot agree. The book on diseases of the ear, nose and throat ideally suited for these readers has yet to be written and cannot be modeled along the classical textbook lines which characterize such books as that of Dr. Morrison.

Studies from the Rockefeller Institute for Medical Research. Vol. 108 and 109. New York: The Rockefeller Institute for Medical Research, 1938. $2.00 each.

Volume 108 of the reprints of the Rockefeller Institute for Medical Research contains further reports by Page and others on experimental hypertension. In addition a wide field in chemistry, physical chemistry, pathology, bacteriology, general physiology and animal and plant pathology is covered.

Among the articles of special clinical interest in Volume 109 are studies on aplastic anemia by Rhoads and his associates. Of particular interest, due to the cases of equine encephalitis encountered in New England this fall, is the article by Trager on multiplication of the virus of equine encephalomyelitis in the tissues of the mosquito.